Knowledge Transfer and Intra-Firm Trade*

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Abstract

We study any differences in terms of knowledge transfer from their parent between 2403 foreign affiliates with and without intra-firm trade in 19 sub-Saharan-African countries in 2009. The extensive and intensive margins of a foreign affiliate's intra-firm trade are positively associated with the importance of parental assistance in several areas (i.e., patents, trademarks, technology and know-how, finance and global market access, etc.). The probability a foreign affiliate has intra-firm trade is also positively correlated with the extensive and intensive margins of finance of working capital and fixed assets from the parent. We conclude that even if firm boundaries mainly exist for the transfer of intangibles (Atalay et al., 2014), this transfer is intensified with intra-firm trade.

Keywords: foreign affiliates, sub-Saharan Africa, intra-firm trade, internalisation of knowledge transfer, production-knowledge link

JEL Classification: F14, F21, F23, L21, L23, L24

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1 Introduction

Recent research on the distinction between foreign affiliates with and without intra-firm trade reveals that those with intra-firm trade seem to be relatively few, larger (Ramondo et al., 2011; Blanas and Seric, 2014b) and more productive (Blanas and Seric, 2014b).

The scarcity of foreign affiliates with intra-firm trade poses the critical question as to why firm boundaries exist, if not for the transfer of physical goods. According to Atalay et al. (2014), who use data on domestic affiliates of US companies, firm boundaries exist mainly because they facilitate the transfer of intangibles (i.e., knowledge). This paper aims at answering a complementary question to the one answered above. Even if firm boundaries mainly exist for the internalisation of knowledge transfers, are there any differences between foreign affiliates with and without intra-firm trade in the intensity of knowledge transferred to them from their parent?

Given that the biggest part of knowledge is tacit¹ (Polanyi, 1958; Keller, 2004), the argument of Atalay et al. (2014) gives a hint of potential inefficiencies when knowledge is mediated through the market, similar to inefficiencies in market transactions of physical goods. It is in line with earlier studies which stress that the market fails to become a viable substitute for the firm mostly for the transfer of non-physical knowledge inputs (Arrow, 1969; Teece, 1977). By contrast, knowledge embodied within a product (Rivera-Batiz and Romer, 1991; Grossman and Helpman, 1991; Eaton and Kortum, 2002; Keller, 2004; McGrattan and Prescott, 2010) is expected to flow efficiently through the market, same as explicit/highly-codifiable knowledge, because the buyer does not need to have access to it in order to utilise the product effectively (Grant, 1996a).

There are three main reasons for which non-internalisation of (tacit) knowledge can lead to market failure. First, the two-sided hold-up issue may arise because contracts cannot be fully written ex ante. Second, due to the asymmetry of information, the buyer cannot know in advance the productivity of a specific type of knowledge or technology, while the seller cannot commit to truthful claims about it (Ethier, 1986; Keller, 2004). Third, the risk of knowledge diffusion and expropriation may deter firms from transferring tacit knowledge through the market (Hansen, 1999; Antràs and Rossi-Hansberg, 2009). Protection of tacit knowledge is of utmost importance given that it is idiosyncratic² and therefore, the most strategically-important resource that firms possess in order to maintain their competitive advantage in local and global markets based on the creation of capabilities which are not easily replicable (Grant, 1991; Quinn, 1992; Grant, 1996b).

In order to study any differences between foreign affiliates with and without intrafirm trade in terms of the knowledge transferred to them from their parent, the argument of knowledge internalisation must be complemented with the argument of the strong

¹The main characteristics of tacit knowledge are the following: low degree of codification, low teachability, high degree of complexity, high degree of system dependence (Zander and Kogut, 1995). That is, tacit knowledge is hard to articulate and can be acquired only through its application (i.e., experience) (Polanyi, 1958; Nelson and Winter, 1982; Winter, 1987; Von Hippel, 1988; Von Hippel, 1994; Grant, 1996b) and hence, cannot be communicated based on a common language (e.g. language of statistical control systems in Crémer et al. (2007)). It must also be compatible with a set of inter-dependent components (Hansen, 1999).

²Part of explicit knowledge and all tacit knowledge are stored in individuals but are created within firms and thus, are deemed as firm-specific (Grant, 1996b).

link between production and knowledge. The production-knowledge link implies that the flow of knowledge is an indispensable part of the production process regardless of this being concentrated in a single entity or split in multiple ones, in a single or multiple locations. Final output cannot be produced in the absence of a "technical dialogue" among different stages of production (Demsetz, 1988; Grant, 1996b), that is, if knowledge does not flow from the one production stage to the other. In practice, this entails that the one stage of production acknowledges the relevance of the expertise of the other stages to its own problems and has a sufficient knowledge and understanding of the problems faced and dealt with by the other stages of production (Simon, 1991). In relation to fragmentation of production, it implies that any transfer of intermediate material inputs must be accompanied by associated knowledge, so that an efficient coordination among the parties involved is achieved.

The parent, as coordinator of production and the main source of intangibles (i.e., HQ services), transfers knowledge to the foreign affiliate based on the level of coordination efficiency of the production network. The more efficient the coordination of production, the more intense the transfer of knowledge from the parent to the foreign affiliate. Coordination efficiency, in turn, is dependent on the internalisation of knowledge flows among the parties involved. By definition, a foreign affiliate with intra-firm trade shares production with its parent and/or a sister affiliate. Hence, it is part of a production network whose coordination efficiency is relatively high because knowledge flows are internalised. Instead, a foreign affiliate without intra-firm trade either does not engage in production sharing or it does so with an unaffiliated company, be it located in the same or a different country. Although a foreign affiliate with no production sharing has low coordination requirements due to its highly independent production process, a foreign affiliate which shares production with an unaffiliated party is part of a production network with a lower level of coordination efficiency than that of a foreign affiliate with intra-firm trade because any knowledge/information flows between the MNC and the unaffiliated party are subject to relatively large market inefficiencies. As mentioned above, these inefficiencies may be the result of incomplete contracts, asymmetric information, and the risk of knowledge diffusion and expropriation.

Consequently, the combination of knowledge flows being subject to market inefficiencies and the strong link between (efficient) production sharing and knowledge transfers is crucial in explaining any differences between foreign affiliates with and without intrafirm trade in the knowledge transferred to them from their parent. If knowledge flows were not subject to market inefficiencies, there would not be any differences in this respect, simply because firm boundaries would have become redundant. Likewise, if there were not any knowledge flows associated with (fragmentation of) production, any differences between the two firm types would hardly exist, even in an environment with market inefficiencies.

We build a simple theoretical framework which explains the differences between foreign affiliates with and without intra-firm trade in terms of the knowledge transferred to them from their parent. In this framework, there are two countries (HOME and HOST) and two stages of production (intermediate-stage (IS) and final-stage (FS) activities). The parent company and a domestic affiliated or unaffiliated party are located in the home country, while the foreign affiliate is located in the host country. The domestic affiliated/unaffiliated party and the foreign affiliate may be conceived as production plants. HQ services always lie within the parent company and thus, the parent, as the main source of intangibles, acts as local and global coordinator of production. The final output is produced with the combination of the IS and FS activities, complemented with the HQ services. By assuming that HOME has a cost advantage in performing IS activities and HOST final-stage activities, two types of foreign affiliates arise. Affiliates with intra-firm trade source intermediate material inputs from the domestic *affiliated* party, produce final output and distribute it in HOST and HOME. Similarly, affiliates without intra-firm trade (or with arm's length trade only) source from the domestic *unaffiliated* party, produce final output and distribute in HOST and HOME.

In order to introduce firm heterogeneity, we rely on Melitz (2003). Each firm draws each productivity from a distribution $G(\theta)$ and pays the fixed cost of entry. Upon observing this draw, it decides over incurring the fixed cost of intra-firm trade or the fixed cost of arm's length trade. Both fixed costs include the fixed costs of setting up a foreign affiliate and the fixed costs of serving the host- and home-country markets. That is, we implicitly assume that all firms are productive enough to incur these fixed costs. The fixed cost of intra-firm trade also includes the fixed cost of setting up a domestic production plant, while the fixed cost of arm's length trade includes the fixed cost of searching and matching with a domestic production plant. Hence, we end up in a situation reminiscent of Antràs and Helpman (2004), in which we can plausibly assume that the fixed cost of setting up a domestic plant is greater than the fixed cost of intra-firm trade is greater than the fixed cost of arm's length trade.

The unit production cost of foreign affiliates with and without intra-firm trade is the cost of imported intermediate material inputs which is crucially normalised by the knowledge transfer from the parent, which is the coordinator of production. In accord with the production-knowledge link, this relationship implies that the more intense the transfer of knowledge associated with the transfer of materials is, the lower the unit production cost and the higher the efficiency level of production sharing are. As already mentioned above, this knowledge transfer, in turn, is a non-decreasing function of the level of coordination efficiency of the three parties involved. Given that coordination between an MNC and a domestic *unaffiliated* party is subject to relatively large market inefficiencies, knowledge is expected to flows less intensely from the parent to a foreign affiliate with arm's length trade only, and thus, the unit production cost of an MNC with arm's length trade only tends to be higher than the unit production cost of an MNC with intra-firm trade. Ultimately, due to the fact that either type of MNCs serve the same number of markets whose aggregate size is the same (HOST and HOME), it is the lower unit production cost of MNCs with intra-firm trade – as a consequence of their more intense transfer of knowledge from the parent –, which explains why they make higher profits above the productivity cutoff of intra-firm trade.

We retrieve all firm-level data from the Africa Investor Survey 2010 which includes information about 2403 foreign affiliates with and without intra-firm trade with operations in 19 sub-Saharan African (SSA) countries for the previous financial year (i.e., 2009) and in all three sectors of the economy (i.e., primary, secondary, and tertiary). Their parents originate from high-income, non-SSA low/middle-income and SSA countries. In contrast to papers in the extant literature which construct variables for vertical relationship based on Input-Output (I-O) tables or disaggregated classifications of products/services produced in the parent and the foreign affiliate (Alfaro and Charlton, 2009), we observe intra-firm trade directly. In particular, we have information about the percentage of a foreign affiliate's production inputs which are imported from its parent and/or a sister affiliate (i.e., intra-firm imports) and the percentage of a foreign affiliate's exports to its parent and/or a sister affiliate (i.e., intra-firm exports). We proxy knowledge transfer from the parent to the foreign affiliate with the importance of parental assistance received by the foreign affiliate in six areas. These are: use of patents, trademarks, brand names; technology and know-how transfer; upgrading quality of workers; access to finance; access to foreign supplier network; access to global markets. All six areas represent different types of tacit knowledge that is transferred from the parent to the foreign affiliate. The measures of the importance of parental assistance are scaled between 0 and 5. The higher the value of the measures, the more important the assistance received from the parent. A limitation of this dataset is that it does not include balance-sheet information for the MNC as a whole. As a consequence, we cannot study the implications of the model for differences in the unit production cost (efficiency level) between MNCs with and without intra-firm trade and their self-selection in intra-firm and arm's length trade.

For our empirical strategy, we invoke probit estimations with a dummy for intrafirm trade (i.e., intra-firm imports, or exports, or both) as dependent variable and the importance of parental assistance in several areas as the main explanatory variable. All regressions control for main firm characteristics (e.g. skill, capital and input intensity, average wage, total number of employees, labour productivity, dummy for provision of training to employees), as well as, for host-country, industry and parent-location heterogeneity, with the incorporation of the relevant dummies. Host-country dummies account for heterogeneity in institutional quality, industry dummies for heterogeneity in technological/knowledge intensity, and parent-location dummies for heterogeneity in business culture. Although the lack of the time dimension does not allow us to study the issue of causality, this paper is still the first to provide strong empirical evidence on the correlation between the extensive and intensive margins of intra-firm trade and knowledge transfer from the parent to the foreign affiliate.

The regression analysis reveals that the probability a foreign affiliate engages in intra-firm trade is positively associated with the (imporance of) assistance received from its parent in the use of patents, trademarks, and brand names, in technology and know-how, in access to finance, access to foreign supplier network, and access to global markets. Linear probability estimations also show that almost all proxies for knowledge transfer from the parent impact positively the extensive and intensive margins of intrafirm imports and intra-firm exports. The positive effects of parental assistance on the extensive and intensive margins of intra-firm trade complement with the main finding of Atalay et al. (2014) in the sense that even if firm boundaries mainly exist for the transfer of intangibles, trade within firm boundaries makes this transfer more intense.

The probability a foreign affiliate engages in intra-firm trade and the knowledge transfer from the parent are positively correlated also for the sample which excludes all foreign affiliates which have no trade and no local backward linkages and therefore, are not part of value-added chains, contrary to the rest of the affiliates in the sample. In other words, we find statistically significant differences in knowledge transfer from the parent between foreign affiliates with intra-firm trade and those which engage in production sharing with unaffiliated parties only (i.e., those with arm's length trade only and those with no trade but with local backward linkages). The size of the marginal effect of the overall parental assistance indicates that a foreign affiliate which receives (more important) assistance from its parent has a higher probability of engaging in intra-firm trade by 19.2%. Given that this sample includes foreign affiliates which are all part of a value-added chain, we consider these results as the main and preferred ones. Importantly, we show that grouping together foreign affiliates with arm's length trade only and those with no trade but with local backward linkages, is justified since we find no statistically significant differences between the two in the knowledge transferred to them from their parent.

Additionally, we find statistically significant differences between foreign affiliates with production sharing with unaffiliated parties only and those with no production sharing. That is, none of the two types of affiliate trades with its parent or a sister affiliate and yet, they differ in the knowledge that is transferred to them from their parent. This implies that although coordination requirements are low for foreign affiliates with no production sharing, this is unlikely to be the case for foreign affiliates with production sharing with unaffiliated parties only. Given that the latter are part of a value-added chain, they are likely to have coordination needs very similar to those of foreign affiliates with intra-firm trade. The crucial difference between these two affiliate types, though, is their level of coordination efficiency which determines the intensity of knowledge transfer from the parent, which acts as coordinator of production. In short, the differences in knowledge transfer from their parent between foreign affiliates with intra-firm trade and those which share production with unaffiliated parties only seem to be better explained by differences in the level of coordination efficiency of the production network which they belong to, rather than in the level of coordination requirements.

We provide extra evidence on the positive association between the probability a foreign affiliate has intra-firm trade and the parental assistance in access to finance. In particular, we find that a foreign affiliate which has its parent as a source of finance of working capital (and fixed assets) (extensive margin) and whose shares are larger (intensive margin) is more likely to engage in intra-firm trade.

The remainder of this paper is structured as follows. Section 2 provides a simple theoretical framework of differences between foreign affiliates with and without intrafirm trade in knowledge transfers to them from their parent. Section ?? describes the data and the variables constructed and includes some stylised facts which motivate the subsequent empirical analysis. Section 4 presents the econometric model, while Sections 5 and 6 discuss the main empirical results and relevant robustness checks, respectively. Section 7 concludes.

2 Theoretical framework

In this section, we describe a simple theoretical framework that guides the empirical analysis of differences between foreign affiliates with and without intra-firm trade in the knowledge transferred to them from their parent.

The need for internalisation of knowledge transfers and the production-knowledge

link are prominent features of this framework. The first feature implies that the market fails to become a viable substitute for the firm especially for the transfer of non-physical knowledge inputs (Arrow, 1969; Teece, 1977). Thus, market inefficiencies are considerably mitigated when knowledge transfers occur within firm boundaries. This is the concept upon which is based the argument of Atalay et al. (2014) regarding the main reason for the existence of firm boundaries.

The second feature implies that the flow of knowledge is an indispensable part of the production process regardless of this being concentrated in a single entity or in multiple ones in a single or multiple locations. Final output cannot be produced if knowledge does not flow from the one stage of production to the other. This entails that the one stage of production acknowledges the relevance of the expertise of the other stages to its own problems and has a sufficient knowledge and understanding of the problems faced and dealt with by the other stages of production (Simon, 1991). In short, there must exist a "technical dialogue" among different stages of production so that production takes place (Demsetz, 1988; Grant, 1996b).

We consider two countries and two stages of production activities. The home country (HOME) is where the parent company and an *affiliated* or *unaffiliated* party are located, and the host country (HOST) is where the foreign affiliate is located. The two stages of production activities are the intermediate-stage (IS) and final-stage (FS) activities. IS activities produce intermediate material inputs and FS activities the final output. Headquarter (HQ) services are additional to the two production stages and take place only within the parent. In this way, the parent acts as local and global coordinator of production. The production of final output requires the combination of IS and FS activities which are complemented with HQ services.

We assume that the home country has a cost advantage in performing IS activities, while the host country a cost advantage in performing FS activities. That is, the cost of labour performing IS activities is lower in the home country ($w_{IS}^{HOME} < w_{IS}^{HOST}$), while the cost of labour performing FS activities is lower in the host country ($w_{FS}^{HOME} > w_{FS}^{HOST}$). Therefore, IS activities take place within the domestic affiliated or unaffiliated party (e.g. domestic production plant owned or not owned by the parent company) and FS activities within the foreign affiliate (e.g. foreign production plant owned by the parent company for the production of final output).

Under this setting, two types of foreign affiliate arise. The first type is a foreign affiliate with intra-firm trade which sources inputs from the domestic affiliated party, produces final output and distributes it in the host- and home-country markets. The second type is a foreign affiliate without intra-firm trade (or with arm's length trade only) which sources from the domestic unaffiliated party, produces final output and distributes it in the host- and home-country markets. In line with our argument on the strong link between production sharing and knowledge transfer, coordination efficiency, represented by the exchange of knowledge among the parties involved, impacts positively the transfer of knowledge from the parent to the foreign affiliate, which acts as coordinator of the whole production network. In the first case, coordination efficiency is the highest possible because any exchange of knowledge is internalised, while in the second case, it is relatively low due to inefficiencies in the share of information and knowledge between the MNC (i.e., parent and foreign affiliate) and the *unaffiliated* party in the home country. The shipment of intermediate inputs and final output involves melting iceberg trade costs. That is, $\tau_{IS} > 1$ and $\tau_{FS} > 1$ units of intermediates and final output, respectively, have to be shipped so that one unit arrives in the destination country. Both trade costs are considered to be symmetric (i.e., import and export trade costs are the same).

In order to introduce firm heterogeneity, we adopt the main features of Melitz (2003). We consider an industry j in the home country supplying a differentiated good. There is a continuum of firms (i.e., prospective MNCs), each of which sells a different variety. A foreign affiliate enters an industry after paying the fixed cost of entry f_e (i.e., capital cost) and engages in monopolistic competition. This is paid only once, at the entry. Free entry requires that the present value of profits equals the entry cost. The probability of death of each firm (δ_{ϵ}) is constant and independent of its productivity level. In the steady state, the firms constantly leave and enter the industry in each productivity category. Since we assume that the firm inflow and outflow rates are equal, the number of foreign affiliates in each productivity category remains constant.

Once the firm pays the entry fixed cost and enters the home-country market, it draws its productivity from a distribution $G(\theta)$. After observing this draw, it decides whether it becomes an MNC which engages in arm's length or intra-firm trade by incurring the relevant fixed costs. Both fixed costs include the fixed cost of setting up a foreign affiliate and the fixed costs of serving the host- and home-country markets. That is, we assume that all firms are productive enough to incur these fixed costs. The fixed cost of intra-firm trade (f_{ift}) includes also the fixed cost of set-up of the domestic *affiliated* party, while the fixed cost of arm's length trade (f_{alt}) includes also the fixed cost of search and match with a domestic *unaffiliated* party. Given that we can plausibly assume that the fixed cost of setting up a domestic production plant is greater than the fixed cost of searching and matching with a domestic supplier (Antràs and Helpman, 2004), we get that the fixed cost of intra-firm trade is greater than the fixed cost of arm's length trade $f_{ift} > f_{alt}$.

An MNC with productivity of at least the same level as the productivity cutoff of arm's length trade and below the productivity cutoff of intra-firm trade ($\Theta_{alt} \leq \theta(z) < \Theta_{ift}$) incurs the fixed cost of arm's length trade and its unit production cost is the cost of imported intermediate material inputs required for the production of one unit of output ($\tau_{IS} * c(m)$) normalised by the associated knowledge transfer from the parent company which acts as coordinator of production ($k(I_{alt})$):

$$\frac{c_{alt}}{\theta(z)} = \frac{\tau_{IS} * c(m)}{\theta(z) * k(I_{alt})} \tag{1}$$

The knowledge transferred from the parent is a non-decreasing function of the level of coordination efficiency among the three parties which form the production network, the MNC and the domestic unaffiliated party (I_{alt}) . A higher level of coordination efficiency implies a more intense transfer of knowledge from the parent to the foreign affiliate. Note that when $k(I_{alt})$ increases, all else held constant, the unit production cost gets lower. Put differently, a more intense knowledge transfer results in a lower unit production cost, that is, in more efficient production sharing. Similarly, an MNC whose productivity level is above the productivity cutoff of intrafirm trade ($\theta(z) \ge \Theta_{ift}$), incurs the fixed cost of intra-firm trade and its unit production cost is given by the following expression:

$$\frac{c_{ift}}{\theta(z)} = \frac{\tau_{IS} * c(m)}{\theta(z) * k(I_{ift})}$$
(2)

The cost of imported intermediate material inputs $(\tau_{IS} * c(m))$ is identical to that of an MNC without intra-firm trade since both types of MNCs produce for the same markets, the host- and home-country markets. However, its normalisation with the relevant knowledge transferred from the parent is a non-decreasing function of the level of coordination efficiency among the parties involved which are all, in this case, part of the same MNC (I_{ift}) . Due to the fact that the exchange of knowledge between the MNC and the domestic unaffiliated party is subject to relatively large market inefficiencies, coordination efficiency is expected to be lower for an MNC with arm's length trade as compared to an MNC with intra-firm trade $(I_{alt} < I_{ift})$. As a consequence, the knowledge that is transferred from the parent to the foreign affiliate in an MNC without intra-firm trade tends to be less intense: $k(I_{alt}) < k(I_{ift})$. Then, it follows that MNCs with intra-firm trade have a lower unit production cost: $\frac{c_{ift}}{\theta(z)} < \frac{c_{alt}}{\theta(z)}$. Its graphic representation is included in the following graph:



The cutoff $K(I_{ift})$ represents the minimum intensity of knowledge transfer from the parent to a foreign affiliate with intra-firm trade. Foreign affiliates which receive knowledge from the parent with this minimum intensity have the highest unit production cost among foreign affiliates of this type. The higher the value of K(I) above $K(I_{ift})$ is, the lower the unit production cost of a foreign affiliate with intra-firm trade becomes. Likewise, the cutoff $K(I_{alt})$ represents the minimum intensity of knowledge transfer from the parent to a foreign affiliate with arm's length trade only. The higher the value of K(I) between the cutoffs $K(I_{alt})$ and $K(I_{ift})$, the lower the unit production cost of a foreign affiliate with arm's length trade only.

On the demand side, we assume that preferences across varieties of a good are of the CES form, with an elasticity of substitution $\epsilon = 1/(1 - \alpha) > 1$. The host-country market demand function generated by these preferences is:

$$x^{HOST}(z) = A^{HOST} * p^{HOST}(z)^{-\epsilon}$$

where A^{HOST} is the level of demand in the host country.

Likewise, the demand function of the home-country market is:

$$x^{HOME}(z) = A^{HOME} * p^{HOME}(z)^{-\epsilon}$$

where A^{HOME} is level of demand in the home country.

MNCs charge the following prices in the host-country market:

$$p^{HOST}(z) = c_t / (\alpha * \theta(z)), \ \forall t \in \{alt, ift\}$$

where $1/\alpha$ is the markup.

The prices charged by MNCs in the home-country market are the following:

$$p^{HOME}(z) = \tau_{FS} * c_t / (\alpha * \theta(z)), \ \forall t \in \{alt, ift\}$$

The profit function of MNCs with arm's length trade only is the sum of revenues realised in the host-country and home-country markets minus the fixed cost of arm's length trade:

$$\pi_{alt}(z) = \theta^{\epsilon-1} \ast B^{HOST}_{alt} + \tau^{1-\epsilon}_{FS} \ast \theta^{\epsilon-1} \ast B^{HOME}_{alt} - f_{alt}$$

where B_{alt}^{HOST} and B_{alt}^{HOME} are given by the following expressions:

$$B_{alt}^{HOST} = (1 - \alpha) * A^{HOST} * (c_{alt}/\alpha)^{1-\epsilon}$$
(3)

$$B_{alt}^{HOME} = (1 - \alpha) * A^{HOME} * (c_{alt}/\alpha)^{1-\epsilon}$$
(4)

The profit function of MNCs with intra-firm trade is the sum of revenues realised in the host-country and home-country markets minus the fixed cost of intra-firm trade:

$$\pi_{ift}(z) = \theta^{\epsilon-1} * B_{ift}^{HOST} + \tau_{FS}^{1-\epsilon} * \theta^{\epsilon-1} * B_{ift}^{HOME} - f_{ift}$$

where B_{ift}^{HOST} and B_{ift}^{HOME} are given by the following expressions:

$$B_{ift}^{HOST} = (1 - \alpha) * A^{HOST} * (c_{ift}/\alpha)^{1-\epsilon}$$
(5)

$$B_{ift}^{HOME} = (1 - \alpha) * A^{HOME} * (c_{ift}/\alpha)^{1-\epsilon}$$
(6)

Given that $1 - \epsilon < 0$ and $\frac{c_{ift}}{\theta(z)} < \frac{c_{alt}}{\theta(z)}$, the comparisons of equation 3 with equation 5 and of equation 4 with equation 6 show that:

$$B_{ift}^{HOST} > B_{alt}^{HOST}$$
 and $B_{ift}^{HOME} > B_{alt}^{HOME}$

Due to the fact that the B's determine the slope of the profit lines, the inequalities above imply that the profit line of MNCs with intra-firm trade is steeper. This is precisely why these MNCs make higher profits above the productivity cutoff of intrafirm trade ($\theta(z) \ge \Theta_{ift}$):

$$\pi_{ift}(z) > \pi_{alt}(z)$$

This is shown also graphically below:



In short, although both types of MNCs serve exactly the same markets, those with intra-firm trade make higher profits above the productivity cutoff of intra-firm trade just because the more efficient coordination among the parties involved results in a more intense transfer of knowledge from the parent to the foreign affiliate and makes their unit production cost lower.

3 Data and descriptive statistics

In this section we describe the main dataset to be employed in the econometric analysis and provide summary statistics for the assistance received from their parent by foreign affiliates with and without intra-firm trade, as well as, graphical representations of their distributions by the importance of the overall assistance received from the parent.

3.1 Data and variables

We draw all firm-level data from the UNIDO Africa Investor Survey 2010. The main aim of this survey is to collect information at the firm level directly from business owners and senior managers about their business and their assessment of the current business environment. It includes information about 2403 foreign affiliates in 19 sub-Saharan-African countries for the last financial year (i.e., 2009), with operations in the primary, secondary, or tertiary sector of the economy. Their parents are located in high-income countries, low/middle-income countries outside sub-Saharan African, as well as, in sub-Saharan African countries.³ All monetary variables are in national currencies and in order to convert these into US dollars (USD), we rely on the exchange rate data of the World Bank World Development Indicators (WDI).

As emphasised in Blanas and Seric (2014b), intra-firm trade is directly observed in the data and therefore, we do not need to construct ourselves any proxy for vertical relationship based on Input-Output (I-O) tables or disaggregated classifications of products/services produced in the parent and the foreign affiliate (Alfaro and Charlton, 2009). In particular, we claim that a foreign affiliate has intra-firm imports if its percentage of production inputs by value that was imported through the parent company is greater than 0 and less than or equal to 100. Similarly, a foreign affiliate has intra-firm exports if its percentage of direct exports by value is supplied to its parent and/or its sister affiliates is greater than 0 and less than or equal to 100. Consequently, a foreign affiliate with intra-firm trade is an entity that satisfies at least one of the two aforementioned conditions (i.e., the firm has either intra-firm imports, or intra-firm exports, or both).

In so doing, the dummy is equal to 0 if the firm has zero intra-firm imports and exports or if both flow types have missing values. In this case, we treat missing values as zeros, rather than as a way of the respondent to avoid disclosing this kind of information. In total, there are only 728 firms which have missing observations for both intra-firm imports and exports. The rest 1675 have non-missing observation for at least one of the two types of flows. In addition, there are 1046 firms which have answered the question on intra-firm imports but not the one on intra-firm exports. Had they wanted to avoid disclosing information for intra-firm trade, they would have done it for both intra-firm imports and exports, rather than for just one of the two. In addition, there are only 6 firms which have answered the question on intra-firm exports but have not answered the one on intra-firm imports.

Although all the above reveal that the treatment of missing observations as zeros should not lead to any significant bias, for the sake of the completeness of our analysis, we test this possibility by dropping from the sample any observations of intra-firm imports and exports which are simultaneously missing, as well as, when at least one of the two is missing.

The measure of importance of assistance received from the parent in six areas, as evaluated by the foreign affiliate, ranges between 0 and 5. To avoid any missing observations for all zero values after their log transformation, we re-scale all measures so that they range between 1 and 6. Value 1 indicates that the foreign affiliate received

 $^{^{3}}$ For a detailed description of the host countries, industries and parent locations of foreign affiliates with and without intra-firm trade, see Blanas and Seric (2014b).

no assistance from the parent, value 2 that the assistance received was not important, value 3 that it was slightly important, value 4 that it was important, value 5 that it was very important, and value 6 that it was crucial. The areas in which the foreign affiliate is assisted and the corresponding variables are the following: 1) use of patents, trademarks and brand names (UsePat), 2) technology and know-how transfer (TechTrans), 3) upgrading quality of staff (QualWork), 4) access to finance (AccFin), 5) access to foreign supplier network (ForSuppNet), 6) access to global markets (GlMarketAcc). We also compute the overall measure of assistance as the average level of assistance provided by the parent in the six aforementioned areas (AssParOv).

As alternative to the aforementioned discrete variables, we construct dummies for the high and low importance of assistance by assistance type and overall assistance. In particular, the dummies for the high importance of assistance are equal to 1 if the measure of the importance of assistance is greater than 3, and 0 otherwise ($D_{UsePatHigh}$, $D_{TechTransHigh}$, $D_{QualWorkHigh}$, $D_{AccFinHigh}$, $D_{ForSuppNetHigh}$, $D_{GlMarketAccHigh}$, $D_{AssParOvHigh}$). Similarly, the dummies for the low importance of assistance are equal to 1 if the measure of importance of assistance is no greater than 3, and 0 otherwise ($D_{UsePatLow}$, $D_{TechTransLow}$, $D_{QualWorkLow}$, $D_{AccFinLow}$, $D_{ForSuppNetLow}$, $D_{GlMarketAccLow}$, $D_{AssParOvLow}$).

Additional variables, similar to the one for the assistance from the parent in access to finance, are those for the source of finance of working capital, among which is the parent company. There are 7 additional sources. In total, we construct 8 dummies, one dummy per source of finance of working capital, which capture the extensive margin, as well as, 8 variables which capture the intensive margin (i.e., the share of finance from a source in the total). The sources of finance along with their relevant dummies and shares are the following: 1) internal funds/retained earnings $(D_{WCIntFund}, WCIntFund), 2)$ loans from banks in the host country $(D_{WCBorBankIns}, WCBorBankIns), 3)$ loans from banks outside the host country $(D_{WCBorBankOuts}, WCBorBankOuts), 4)$ borrowing from family/friends/individual lenders $(D_{WCBorFam}, WCBorFam), 5)$ borrowing from nonbank financial institutions (e.g. equity funds) $(D_{WCBotNonBank}, WCBotNonBank)$, 6) purchases on credit from suppliers and advances from customers $(D_{WCPurchCredit}, D_{WCPurchCredit})$ WCPurchCredit), 7) issued new equity shares or new debt (including commercial paper and debentures) $(D_{WCIssNewEq}, WCIssNewEq), 8)$ the parent company $(D_{WCParent}, M)$ WCParent). Each dummy takes value 1 if the firm makes use of the corresponding source of finance of working capital (i.e., the share of the source is greater than 0 and less than or equal to 100), and 0 otherwise.

3.2 Descriptive statistics

In Table 1, we provide summary statistics for the importance of each type of assistance and overall assistance provided by the parent by area and overall to foreign affiliates with and without intra-firm trade (Panel A) and to foreign affiliates with arm's length trade only and without trade at all (Panel B). Panel A shows that foreign affiliates with intra-firm trade are on average more importantly assisted by their parent in all areas examined except for worker quality upgrading. The mean values for foreign affiliates with intra-firm trade range between 4.1 (assistance in upgrading quality of workers) and 4.8 (assistance in access to finance), while the mean values for those without intrafirm trade range between 3.9 (assistance in the use of patents, trademarks, and brand names) and 4.5 (assistance in access to finance).

In Panel B, we show the same summary statistics after decomposing foreign affiliates without intra-firm trade into those which trade only at arm's length and those which do not trade at all. Interestingly, the mean values for both types of foreign affiliates are high, albeit lower than those for foreign affiliates with intra-firm trade in all areas examined except for worker quality upgrading. They range between 4 (assistance in the use of patents, trademarks, and brand names) and 4.6 (assistance in access to finance) for those with only arm's length trade and between 3.8 (assistance in the use of patents, trademarks, and brand names) and 4.5 (assistance in access to finance) for those without trade.

Given that foreign affiliates without trade may engage in local backward linkages and hence, be part of a value-added chain as those with intra-firm trade and those with arm's length trade only, in Panel C, we distinguish between foreign affiliates which do not trade but engage in local backward linkages and those which do not either trade or engage in local backward linkages. The latter may be considered as more autonomous firms which serve different purposes than those which belong to value-added chains (e.g. "horizontal" affiliates). Importantly, the average levels of assistance received by both types of affiliates seem to be very close to each other, and although they are lower compared to the corresponding averages for foreign affiliates with intra-firm trade and with arm's length trade only, they remain high.

<< Table 1 about here >>

In Appendix A, we test the sensitivity of the summary statistics of Panel A to dropping observations which are missing for both intra-firm imports and intra-firm exports (Table A1), as well as, to dropping observations which are missing for at least one of the two intra-firm trade flow types (Table A^2). In both tables, the mean values of the assistance received from the parent are greater for foreign affiliates with intrafirm trade in all areas examined except for the assistance in worker quality upgrading. In the first table, the range of the mean values for foreign affiliates with intra-firm trade is between 4.1 (assistance in upgrading quality of workers) and 4.8 (assistance in access to finance), while the range for those without intra-firm trade is between 3.9 (assistance in the use of patents, trademarks, brand names) and 4.6 (access to finance). The mean ranges in the second table are very similar (i.e., between 4.1 and 4.9 for foreign affiliates with intra-firm trade and between 4 and 4.7 for those without intrafirm trade) and their minimum and maximum values correspond to the same types of assistance. The robustness checks indicate that the main summary statistics produced are insensitive to the drop of observations which are missing for both intra-firm imports and exports or for at least one of the two.

In Table A3, we provide the same summary statistics by sector. We split the aggregate economy in five sectors: Agriculture, Mining, Manufacturing, Electricity, Gas and Water (EGW) supply and Construction, and Services. Same as in the whole economy, foreign affiliates with intra-firm trade have higher mean values of overall assistance received from their parent in all five sectors, as well as, in most of the areas examined. The mean value of assistance in worker quality upgrading is lower for foreign affiliates with intra-firm trade in all sectors except for Mining where it is greater, and in Services where it is equal to the mean of foreign affiliates without intra-firm trade. Also, the mean value of assistance through technology and know-how transfer is higher in all sectors for foreign affiliates with intra-firm trade except for Mining where the mean values of both firm types are equal. The ranges of the mean values for both firm types in each sector are also very similar to those for the whole economy.

Table A4 displays summary statistics for the assistance received from the parent by the level of income of its country of origin. In order to classify the country in which each parent company is located by the level of its income, we rely on the World Bank Historical Country Classification. We consider three kinds of parent locations: high-income, low/middle-income outside sub-Saharan Africa, and low/middle-income in sub-Saharan Africa. We classify a parent location as high-income if it is classified as such by the World Bank for the year 2010, and as non-SSA low/middle-income if it is a country outside sub-Saharan Africa which is classified by the World Bank for 2010 as upper-middle-, lower-middle- or low-income. The parents of the remaining firms are considered to be located in (low/middle-income) countries in sub-Saharan Africa.

We find that foreign affiliates with intra-firm trade, whose parents are in any of the three kinds of locations, have higher mean values of assistance in all areas examined except for worker quality upgrading. Also, the mean value of assistance received from the parent in access to finance is the same for both firm types when their parents are located in sub-Saharan Africa. The ranges of the mean values for both firm types in all three panels are very close to those in Table 1.

Tables A5, A6, and A7 portray the same summary statistics by foreign investor origin and sector. In general, the higher mean values of foreign affiliates with intra-firm trade in all three tables suggest that these firms are more importantly assisted by their parent, in line with the main findings. This also holds for assistance in worker quality upgrading for those in Mining and Services whose parents are located in high-income countries, for those in Agriculture, Mining, EGW supply and Construction whose parents are located in low/middle-income countries, as well as, for those in Agriculture and Manufacturing whose parents are located in sub-Saharan Africa.

By contrast, foreign affiliates with intra-firm trade, which operate in Mining and whose parents are located in high-income countries, as well as, those in Services, whose parents are located in non-SSA low/middle-income countries, seem to receive less important assistance in access to finance. Some additional differences compared to the main findings are shown in Panel C of Table A7, which shows that those with intra-firm trade which operate in EGW supply and Construction and whose parents are located in SSA countries, are less importantly assisted overall, as well as, in the use of patents, trademarks and brand names, in access to finance and to foreign supplier network. The ranges of the mean values by parent location and sector are very similar to those in Table 1.

In the figures below, we compare the distributions of foreign affiliates with and without intra-firm trade in terms of the overall assistance provided by their parent.

Figure 1 plots the kernel densities of foreign affiliates with and without intra-firm trade by the overall assistance received from their parent. It reveals that although both distributions are skewed to the left, the skewness for foreign affiliates with intra-firm trade is higher. Specifically, the concentration of foreign affiliates with intra-firm trade is lower in the left tail of the distribution and higher in the right tail.

<< Figure 1 about here >>

Figure 2 reveals a very similar picture. The importance of assistance received from the parent is higher for foreign affiliates with intra-firm trade in all 7 percentiles except for the 99th.

<< Figure 2 about here >>

In Figures A1 to A12, we portray the kernel densities and percentile distributions of the two firm types in terms of the assistance received from their parent in the following six areas: 1) use of patents, trademarks, brand names, 2) technology and know-how, 3) upgrading worker quality, 4) access to finance, 5) access to foreign supplier network, 6) access to global market. As regards kernel densities, in principle, the left tail of the distribution of foreign affiliates with intra-firm trade is thinner. The values of the assistance received from their parent are also greater in almost all percentiles, especially, the intermediate ones.

In sum, our data analysis indicates that foreign affiliates with intra-firm trade seem to receive more important overall assistance from their parent. We look into correlations between intra-firm trade and the importance of assistance received from the parent in the econometric analysis in Section 5.

4 Econometric model

In order to study the correlation of knowledge transfer from the parent and the probability a foreign affiliate engages in intra-firm trade, we estimate a probit model, similar to that in Blanas and Seric (2014b), in which we incorporate the variables described in Section 3.1, after controlling for main firm characteristics, as well as, for host-country, industry, and parent-location fixed effects. Each variable of interest enters the model separately.

The estimating probit model for firm z in (host) country c and industry j, whose parent company is located in country p, is the following:

$$D_{ift,zcjp} = \alpha + \beta_1 * X_{zcjp} + \beta_2 * fchar_{zcjp} + \beta_c * D_c + \beta_j * D_j + \beta_p * D_p + \epsilon_{zcjp}$$
(7)

where the dependent variable, $D_{ift,zcjp}$, is a dummy taking value 1 if firm z has any type of intra-firm trade flows (i.e., either intra-firm imports, or intra-firm exports, or both), and 0 otherwise; X is a proxy for knowledge transfer from the parent to the foreign affiliate. All non-dummy variables enter the model in logs.

Vector *fchar* comprises main firm characteristics such as the log of skill intensity (i.e., share of technical, supervisory and managerial employees in total number of employees), the log of capital intensity (i.e., ratio of capital stock to total number of employees), the log of total number of employees as a proxy for firm size, the log of wage per employee (i.e., total wage bill over total number of employees), the log of labour productivity (i.e., ratio of total sales to total number of employees), the log of input intensity (i.e., ratio of value of inputs to total number of employees) and a dummy which takes value 1 if firm z provides formal internal/external training to its employees and 0 otherwise.

Any unobserved heterogeneity across host countries (e.g. institution quality, business environment), industries (e.g. technological intensity) and parent locations (e.g. corporate culture) is accounted for by sets of host-country, industry, and parent-location dummies $(D_c, D_j, D_p, \text{respectively})$.

5 Empirical results⁴

Table 2 displays the results from the estimation of the probit model with variables for the importance of assistance received from the parent in six main areas, as well as, the average of these. The coefficient estimates in all columns except for the third one are positive and mostly significant at 1%. They imply that foreign affiliates which receive more important assistance from their parent in the use of patents, trademarks and brand names, technology and know-how, access to finance, access to foreign supplier network, and access to global markets are more likely to engage in intra-firm trade. The positive and highly significant coefficient estimate in the last column indicates that this is also true for the overall assistance received from the parent.

<< Table 2 about here >>

Table 3 displays the results from the estimation of regressions with dummies for high and low importance of parental assistance. In line with the results in Table 2, the positive and significant coefficient estimates in Panel A suggest that foreign affiliates which deem of high importance the assistance received from the parent in the use of patents, trademarks, and brand names, in technology and know-how, and in access to global markets, are more likely to engage in intra-firm trade. The coefficient estimate of the dummy for the overall assistance is also positive and highly significant. The negative and statistically significant coefficient estimates in Panel B suggest that foreign affiliates which value the assistance received from the parent in the same areas as of low importance are less likely to engage in intra-firm trade.

<< Table 3 about here >>

So far, we have shown that knowledge transfer from the parent to the foreign affiliate is positively associated with the probability it engages in intra-firm trade, or equivalently, with their extensive margin of intra-firm trade. In Tables 4 and 5, we estimate linear probability regressions in order to show how knowledge transfers from the parent can impact the extensive and intensive margins of foreign affiliates' intra-firm imports and intra-firm exports.

The dependent variable in the regressions of Panel A of Table 4 is the dummy for intra-firm imports (D_{ifim}) , while that in the regressions of Panel B is the share of production inputs imported from the parent and/or a sister affiliate in the total value of production inputs (ifimToInp). The coefficient estimates of the measures

 $^{^4\}mathrm{The}$ full-length version of all tables in this section are relegated to Appendix B. See Tables B1 to B12.

of the importance of parental assistance are positive and significant in most of the columns in both panels, which suggest that knowledge transfers from the parent seem to be positively correlated with both the extensive and the intensive margin of foreign affiliates' intra-firm imports.

<< Table 4 about here >>

Panel A of Table 5 includes regressions with a dummy for intra-firm exports as dependent variable (D_{ifex}) , while Panel B, regressions with the share of intra-firm exports in total direct exports (ifexToExp). The positive and significant coefficient estimates of the measures of the importance of parental assistance in most of the columns in both panels indicate that knowledge transfers from the parent tend to be positively associated with both the extensive and the intensive margin of foreign affiliates' intra-firm exports.

<< Table 5 about here >>

Given that foreign affiliates with no trade and no local backward linkages are not part of a value-added chain and may have a more autonomous production process and relatively low requirements for coordination with their parent, Table 6 shows the results of the same regressions as in Table 2 for a sample which excludes this type of affiliates. As a result, foreign affiliates without intra-firm trade are those with arm's length trade only and those with no trade but with backward linkages with local unaffiliated parties. According to this table, foreign affiliates which are more importantly assisted from their parent are more likely to engage in intra-firm trade. The size of the positive and highly significant coefficient estimate of the overall parental assistance suggests that the increase in the importance of overall parental assistance by one rank increases the probability a foreign affiliate engages in intra-firm trade by 19.2%. Due to the fact that the sample includes foreign affiliates which are all part of a value-added chain, we view these results as the main and preferred ones.

<< Table 6 about here >>

In order to show that foreign affiliates with arm's length trade only and those with no trade but with local backward linkages are correctly considered to be in the same group, we test their differences in terms of the assistance received from their parent. In so doing, we drop from the benchmark sample all foreign affiliates with intra-firm trade and those without any kind of production sharing and estimate the main regressions with a dummy for arm's length only as dependent variable. Table 7 reveals that there are no statistically significant differences between the two firm types in terms of the assistance they receive from their parent, except for the assistance in access to foreign supplier network.

$$<<$$
 Table 7 about here $>>$

In order to show that our preferred results in Table 6 are not driven by potential similarities in parental assistance between foreign affiliates with production sharing with

unaffiliated parties only and those with no production sharing, we estimate the main regressions for a sample which excludes all foreign affiliates with intra-firm trade and have a dummy for no production sharing as dependent variable. According to Table 8, there are indeed statistically significant differences between these two types of affiliates in the overall assistance they receive from their parent, as well as, in the assistance in the use of patents, trademarks and brand names, access to finance, and access to foreign supplier network. This is an essential result in the sense that although none of the two types of foreign affiliates trade with their parent, they do have differences in the knowledge that they receive from their parent. Hence, the low requirements for coordination with the parent because of lack of trade and a more autonomous production process is unlikely to be a satisfactory and convincing explanation for the differences in parental assistance between foreign affiliates with intra-firm trade and those which share production with unaffiliated parties only. Rather, these differences are better explained by differences in the efficiency of the coordination among the parties of the production network, as described in Section 2.

<< Table 8 about here >>

The next two tables provide extra evidence on the positive association of parental assistance in access to finance and in particular, to finance of working capital, with the probability a firm has intra-firm trade.

Panel A of Table 9 shows that foreign affiliates which finance their working capital through internal funds and retained earnings (column 1) and through borrowing from banks in the host country (column 2) are less likely to engage in intra-firm trade, while those which finance working capital through the parent are more likely to engage in such a trade activity (column 8). Given that the coefficient estimates of the relevant dummies in the rest of the columns are not significant, we do not observe any differences between the two types of affiliates in other sources of finance of working capital. Panel B of Table 9 shows that a higher share of finance of working capital through the parent is more likely to be associated with intra-firm trade. Instead, higher shares of finance of working capital through internal funds/retained earnings and loans from host-country banks are associated with a lower probability of intra-firm trade.

<< Table 9 about here >>

We summarise the main findings as follows. Foreign affiliates which receive more important assistance from their parent in the use of patents, trademarks, and brand names, in technology and know-how, in access to finance, access to foreign supplier network, and access to global markets, are more likely to engage in intra-firm trade. The overall assistance received from the parent is associated with a 19.2% higher probability a foreign affiliate engages in intra-firm trade. In addition, almost all types of parental assistance impact positively the extensive and intensive margins of a foreign affiliate's intra-firm imports and intra-firm exports. These findings suggest that trade of a foreign affiliate with its parent and/or its sister affiliates tends to intensify the transfer of intangibles from the parent to it. The statistically significant differences in knowledge transferred from their parent between foreign affiliates which engage in production sharing only with unaffiliated parties and those which do not engage in production sharing suggest that the intensified transfer associated with intra-firm trade is better explained by the combination of the need for internalisation of knowledge transfers and the strong link between production and knowledge, rather than simply by differences in coordination requirements among the parties of the production network.

We also find that the extensive and intensive margins of finance of working capital (and fixed assets) from the parent are positively correlated with the probability a foreign affiliate engages in intra-firm trade, in line with the more important assistance received from the parent in access to finance.

6 Robustness checks

In this section we test the robustness of our main results by performing numerous checks.

As alternative to the main discrete variables for the assistance received from the parent, we incorporate in the model dummies for each rank of importance of parental assistance in each of the six areas examined. For the parental assistance in the use of patents, trademarks and brand names, Table C1 portrays the coefficient estimates of dummies which are equal to 1 if the firm has never received assistance in this area $(D_{UsePat1})$, if the assistance received was not important $(D_{UsePat2})$, was slightly important $(D_{UsePat3})$, important $(D_{UsePat4})$, very important $(D_{UsePat5})$, and crucial $(D_{UsePat6})$.

Similarly, the coefficient estimates of dummies for the importance of assistance received in technology and know-how ($D_{TechTrans1}$, $D_{TechTrans2}$, $D_{TechTrans3}$, $D_{TechTrans4}$, $D_{TechTrans5}$, $D_{TechTrans6}$) are included in Table C2, those for the importance of assistance in worker quality upgrading ($D_{QualWork1}$, $D_{QualWork2}$, $D_{QualWork3}$, $D_{QualWork4}$, $D_{QualWork5}$, $D_{QualWork6}$) in Table C3, in access to finance ($D_{AccFin1}$, $D_{AccFin2}$, $D_{AccFin3}$, $D_{AccFin4}$, $D_{AccFin5}$, $D_{AccFin6}$) in Table C4, in access to foreign supplier network ($D_{ForSuppNet1}$, $D_{ForSuppNet2}$, $D_{ForSuppNet3}$, $D_{ForSuppNet4}$, $D_{ForSuppNet5}$, $D_{ForSuppNet6}$) in Table C5, and in access to global markets ($D_{GlMarketAcc1}$, $D_{GlMarketAcc2}$, $D_{GlMarketAcc3}$, $D_{GlMarketAcc4}$, $D_{GlMarketAcc5}$, $D_{GlMarketAcc6}$) in Table C6.

According to these tables, a foreign affiliate which deems as crucial the overall assistance received from the parent and the assistance received in the use of patents, trademarks and brand names, in technology and know-how, in access to foreign supplier network and to global markets is more likely to engage in intra-firm trade. A foreign affiliate that has never received overall assistance and assistance in the use of patents, trademarks and brand names, in technology and know-how, in access to finance and to global markets is less likely to engage in intra-firm trade. A foreign affiliate that receives important assistance in order to access a foreign supplier network and unimportant assistance to access global markets is also less likely to engage in intra-firm trade.

In tables C7 to C12, we incorporate all dummies but one for each type of assistance. In the first column of each of these tables we drop the dummy for the highest level of importance of parental assistance, while in the second, the dummy for the lowest level. Therefore, the control group in the first case comprises foreign affiliates with the highest rank of importance of parental assistance, while in the second, foreign affiliates with the lowest rank. In line with the main results, foreign affiliates whose rank of importance of parental assistance is lower than the highest one are less likely to engage in intra-firm trade. Those whose rank is above the lowest rank are more likely to engage in intra-firm trade.

We make sure that the response rate to the questions on intra-firm imports and exports does not bias the main effects of parental assistance by dropping any observations which are missing for both intra-firm imports and exports (Table C13), as well as, any observations which are missing for at least one of the two trade flow types (Table C14). We re-estimate the regressions for these two samples with firms in manufacturing (Tables C15 and C16, respectively). We obtain very similar coefficient estimates in terms of sign, size, and precision in all tables.

In lieu of the dummy for intra-firm trade as dependent variable, we also use the dummy for intra-firm imports (Table C17), for intra-firm exports (Table C18) and for both intra-firm imports and exports (Table C19). In tables C20 to C25, we also have as dependent variables dummies for intra-firm imports and intra-firm exports which account for at least 25%, 50% and 75% of total production inputs and total direct exports, respectively (D_{ifim25} , D_{ifim50} , D_{ifim75} , D_{ifex25} , D_{ifex75}). We obtain very similar results to the benchmark ones.

Two concerns with the use of the measures of parental assistance is that they may be capturing the age of the firm and the mode of investment of the foreign investor. A younger firm and a firm which is set up by the parent through Greenfield FDI may receive more important parental assistance. Moreover, foreign investors may opt for taking over existing firms in the host country which possess critical intangible assets through M&A (i.e., "cherry-picking"). If the intangibles and capabilities of a foreign investor complement with those of the foreign affiliate, the latter may be more importantly assisted by the parent as compared to the case in which they are substitutes. We control for firm age by adding a variable for the number of years since the set-up of the firm (*firmAge*) (Table C26) and dummies for firm age (Table C27), and for the mode of investment, by adding dummies for five modes of investment available (Table C28). These are: 1) creation of a new operation as wholly-owned enterprise, 2) creation of a new operation as joint venture, 3) purchase of pre-existing assets from local private owners, 4) purchase of pre-existing assets from private foreign owners, 5) purchase of pre-existing state-owned assets.

We restrict the sample to manufacturing (Table C29), to resource-based, low-tech, and high- and medium-tech manufacturing (Tables C30, C31, and C32, respectively), to MOFAs (Table C33), and to MOFAs in manufacturing (Table C34).

We incorporate dummies for the broader definition of parent location (i.e., highincome, non-SSA low/middle-income, SSA country) (Table C35), dummies for pairs of host countries and industries (Table C36) and for pairs of parent locations and industries (Table C37). In all these cases, the results remain largely unaltered.

We account for economic geography factors by replacing host-country and parentlocation dummies with dummies for pairs of host countries and parent locations (Table C38) and by controlling in the benchmark model for geographical distance (geoDist) (Table C39), contiguity (contiguity) (Table C40), common official language (comOffLang) (Table C41), and colonial ties (colony) (Table C42) between the host country and the parent location.

In addition, we obtain very similar results when we incorporate dummies for the company type (i.e., wholly-owned, joint-venture, individual foreign investor) (Table C43), when we restrict the sample to individual foreign investors and consider the assistance they receive in several areas from other associate companies in the business group (Table C44), as well as, when we consider alternative functional forms, namely, the logistic and linear probability models (Tables C45 and C46, respectively.)

In order to control for the possibility the variables for parental assistance in the use of patents, trademarks and brand names and in technology and know-how capture exclusively knowledge creation rather than knowledge acquisition and application, we augment the benchmark model with the ratios of the average annual amount spent on R&D during the last three financial years to total employment (RDToEmp) and to total sales (RDToSales), the ratios of the average annual amount spent on adaptation of technology during the last three financial years to total employment (adaptTechToEmp) and to total sales (adaptTechToSales), the ratios of the average annual amount spent on technological upgrading (R&D and adaptation of technology) during the last three financial years to total employment (techUpqToEmp) and to total sales (techUpqToSales), a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on R&D during the last three financial years $(D_{R\&D})$, a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on adaptation of technology during the last three financial years $(D_{adaptTech})$, and a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on either R&D or adaptation of technology during the last three financial years $(D_{techUpq})$. We estimate these regressions for a sample restricted to firms in non-services sectors since questions on R&D and adaptation of technology have not been addressed to those in Services. Tables C47 and C48 show that the coefficient estimates of the main explanatory variables remain positive and highly significant, while their size increases slightly. All coefficient estimates of controls for knowledge creation are statistically insignificant, except for the coefficient estimate of the dummy for engagement in R&D activities which is positive and significant at 5%and 10%, respectively.

The effects of the dummies for the high and low levels of importance of parental assistance remain largely unchanged when we restrict the sample to firms in manufacturing (Tables C49 and C50, respectively)

The effects of the different types of knowledge transferred from the parent on foreign affiliates' extensive and intensive margins of intra-firm trade remain unaltered when we restrict the sample to firms in manufacturing (Tables C51 and C52).

As a follow-up on the preferred results of Table 6, we estimate benchmark regressions for two samples which include foreign affiliates with intra-firm trade and the decomposition of those which share production with unaffiliated parties only, namely, those which trade only at arm's length and those which do not trade but engage in local backward linkages. In accord with the preferred results, the coefficient estimates in almost all columns are positive and statistically significant (Tables C53 and C54). The results also hold when we restrict the two samples to firms in manufacturing (Tables C55 and C56). Same as for the whole economy, we fail to find any statistically significant differences in terms of knowledge transfer from the parent between foreign affiliates with arm's length trade only and those with no trade but with local backward linkages in the manufacturing sector (Tables C57).

Table C58 shows that the effects of the extensive and intensive margins of finance of fixed assets on the probability of intra-firm trade are very similar to those of working

capital. The sources of finance of fixed assets are identical to those of working capital. The variables that capture the extensive margin are $D_{FAIntFund}$, $D_{FABorBankIns}$, $D_{FABorBankOuts}$, $D_{FABorFam}$, $D_{FABotNonBank}$, $D_{FAPurchCredit}$, $D_{FAIssNewEq}$, $D_{FAParent}$, while those that capture the intensive margin are FAIntFund, FABorBankIns, FABorBankOuts, FABorFam, FABotNonBank, FAPurchCredit, FAIssNewEq, FAParent. Foreign affiliates which finance their fixed assets through internal funds and retained earnings, as well as, through non-bank financial institutions (e.g. equity funds) are less likely to engage in intra-firm trade. Higher shares in these two sources are also less likely to be related to intra-firm trade (columns 1 and 5 of Panels A and B). By contrast, foreign affiliates which have their parent as a source of finance of fixed assets and have a higher share of this source in the total are more likely to be those with intra-firm trade.

7 Concluding remarks

Using a sample of 2403 foreign affiliates with and without intra-firm trade in 19 countries in sub-Saharan Africa in 2009, we study any differences between the two firm types in terms of the knowledge transferred to them from their parent.

We find that the probability a foreign affiliate engages in intra-firm trade is positively associated with the importance of parental assistance in several areas (use of patents, trademarks, and brand names, technology and know-how, access to finance, to foreign supplier network and to global markets). A foreign affiliate which receives overall parental assistance from the parent has a higher probability of engaging in intra-firm trade by 19.2%. Knowledge transfer from the parent impacts also positively the intensive margin of intra-firm imports and intra-firm exports. In relation to the argument of Atalay et al. (2014), according to which firm boundaries exist mainly for the transfer of intangibles rather than of physical goods, our main findings suggest that this transfer is intensified when foreign affiliates trade with their parent and/or their sister affiliate(s).

The positive association between parental assistance in access to finance and the probability a foreign affiliate engages in intra-firm trade is supported by additional results. A foreign affiliate which has a higher extensive and intensive margin of finance of working capital (and fixed assets) from the parent is more likely to engage in intra-firm trade.

Despite the novelty of all findings discussed above, the lack of the time dimension in the data does not allow us to study causality and thus, it is left for future work. The strong evidence on the more intense transfer of knowledge to the average foreign affiliate with intra-firm trade calls for the investigation of potential differences between the two firm types in many other dimensions.

Except for the risk of knowledge diffusion and expropriation from unaffiliated parties, top managers in the parent company may be concerned about knowledge expropriation from managers in the foreign affiliate. As soon as these managers gain access to and control of critical tangible and intangible resources, they may engage in opportunistic behaviour, expropriate these resources and set up a rival firm. Top managers can anticipate this and may opt for increasing their span of control (i.e., number of managers under their supervision) in an attempt to curb the positional power of middle managers in the foreign affiliate. This can be translated into a lower level of autonomy in decision making of the foreign affiliate. Consequently, the well-documented differences in the intensity with which knowledge is transferred to foreign affiliates with and without intra-firm trade may result in differences in their decision making power. Blanas and Seric (2014a) study this issue by employing the same data as in this paper.

Finally, the differences in the intensity of knowledge transfers, especially in the form of information about access to foreign markets or access to foreign supplier network, may result in differences in the extensive and intensive margin of their sister affiliates. Given that size and productivity premia can explain only partially the extensive margin of firms' imports and exports (Armenter and Koren, 2014), any differences between the two firm types in this dimension may also be explained by differences in the extensive and intensive margin of their sister affiliates, based on the concept of trade contacts, developed by Chaney (2014). Blanas and Seric (2014c) study any potential differences in the extensive margin of sister affiliates, as well as, in the extensive margin of aggregate imports and exports and of imports and exports with geographical breakdown.

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Tables and figures with main descriptive statistics 8

Panel A	7	with intr	a-firr	n trade	э	wi	thout in	tra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	509	4.6	1.4	1	6	1740	3.9	1.7	1	6
TechTrans	511	4.7	1.2	1	6	1752	4.4	1.4	1	6
QualWork	510	4.1	1.3	1	6	1751	4.2	1.3	1	6
AccFin	512	4.8	1.2	1	6	1750	4.5	1.3	1	6
For SuppNet	510	4.7	1.2	1	6	1749	4.3	1.5	1	6
GlMarketAcc	509	4.6	1.4	1	6	1734	4	1.7	1	6
AssParOv	513	4.6	0.9	1	6	1758	4.2	1.1	1	6
Panel B	with	arm's le	ength	trade	only		with	out tr	ade	
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	1160	4	1.7	1	6	580	3.8	1.8	1	6
TechTrans	1164	4.4	1.4	1	6	588	4.4	1.4	1	6
QualWork	1164	4.2	1.3	1	6	587	4.1	1.3	1	6
AccFin	1163	4.6	1.3	1	6	587	4.5	1.4	1	6
For SuppNet	1165	4.4	1.4	1	6	584	3.9	1.6	1	6
GlMarketAcc	1159	4.1	1.6	1	6	575	3.9	1.8	1	6
AssParOv	1167	4.3	1	1	6	591	4.1	1.1	1	6
Panel C		dblink a	nd no	o trade	;	no	o dblink	and :	no trac	le
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	158	3.7	1.6	1	6	422	3.8	1.8	1	6
TechTrans	158	4.2	1.4	1	6	430	4.4	1.3	1	6
QualWork	158	4.2	1.3	1	6	429	4.1	1.4	1	6
AccFin	158	4.5	1.3	1	6	429	4.4	1.4	1	6
For SuppNet	158	3.8	1.6	1	6	426	3.9	1.6	1	6
GlMarketAcc	158	3.7	1.7	1	6	417	4	1.8	1	6
AssParOv	158	4	1.1	1	6	433	4.1	1.1	1	6

Table 1: Summary statistics for assistance received from the parent

Autory15041.1104334.11.116Notes: Authors' calculations. UsePat:level of assistance provided by the parent in use of patents, trademarks,
brand names, TechTrans:level of assistance provided by the parent in use of patents, trademarks,
brand names, TechTrans:level of assistance provided by the parent in access to finance, ForSuppNet:level of assistance provided by the parent in access to foreign supplier
network, GlMarketAcc:level of assistance provided by the parent in access to foreign supplier
network, GlMarketAcc:level of assistance provided by the parent.Source:UNIDO Africa Investor Survey 2010.UNIDO Africa Investor Survey 2010.level of assistance provided by

Figure 1: Importance of overall assistance received from the parent (kernel density)



Figure 2: Importance of overall assistance received from the parent (percentile distribution)



9 Tables with main results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.126^{***}	0.0994^{***}	-0.0337	0.0547^{*}	0.0679^{**}	0.0821^{***}	0.163^{***}
	[0.023]	[0.029]	[0.027]	[0.028]	[0.030]	[0.023]	[0.045]
Obs	1543	1552	1555	1554	1554	1547	1558
$Pseudo - R^2$	0.22	0.21	0.20	0.20	0.21	0.21	0.21
Log-likelihood	-702.5	-714.9	-720.5	-719.7	-717.9	-710.4	-714.9

Table 2: Assistance from the parent company in several areas

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to for assistance provided by the parent in access to forsup network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 3: Assistance from the parent company in several areas (dummies for values of importance of assistance greater and no greater than 3)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
D_{ift}	$D_{UsePatHigh}$	$D_{TechTransHigh}$	$D_{QualWorkHigh}$	$D_{AccFinHigh}$	$D_{ForSuppNetHigh}$	$D_{GlMarketAccHigh}$	$D_{assParOvHigh}$
	0.101^{***}	0.0785^{***}	-0.0274	0.0447	0.0383	0.0772^{***}	0.0818^{***}
	[0.022]	[0.026]	[0.026]	[0.028]	[0.027]	[0.023]	[0.029]
Obs	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Log-likelihood	-721.4	-726.4	-729.5	-728.9	-729.1	-725.1	-726.7
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
D_{ift}	$D_{UsePatLow}$	$D_{TechTransLow}$	$D_{QualWorkLow}$	$D_{AccFinLow}$	$D_{ForSuppNetLow}$	$D_{GlMarketAccLow}$	$D_{assParOvLow}$
	-0.0973***	-0.0699**	0.0376	-0.0298	-0.0284	-0.0699***	-0.0703**
	[0.023]	[0.028]	[0.027]	[0.030]	[0.029]	[0.024]	[0.031]
Obs	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Log-likelihood	-722.2	-727.4	-729.1	-729.6	-729.6	-726.2	-727.8

 $\frac{1}{125} = \frac{1}{125} + \frac{1}$

Table 4: Impact of the assistance from the parent company in several areas on the extensive and intensive margin of intra-firm imports

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
D_{ifim}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
-	0.0769^{***}	0.0596^{***}	-0.0385	0.0462^{**}	0.0469^{**}	0.0358^{**}	0.0973^{***}
	[0.016]	[0.020]	[0.024]	[0.021]	[0.020]	[0.016]	[0.029]
numEmp	0.0210**	0.0230**	0.0243***	0.0236***	0.0224**	0.0245***	0.0231**
	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]
salesToEmp	0.0179**	0.0184**	0.0194**	0.0196**	0.0185**	0.0188**	0.0181**
	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]
Obs	1699	1708	1711	1710	1710	1703	1714
R^2	0.12	0.11	0.11	0.11	0.11	0.11	0.11
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
ifimToInp	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0594^{***}	0.0548^{***}	-0.0235	0.0359^{**}	0.0390^{**}	0.0292^{**}	0.0814^{***}
	[0.012]	[0.015]	[0.017]	[0.016]	[0.016]	[0.012]	[0.022]
numEmp	0.00761	0.00754	0.00893	0.00831	0.00790	0.00853	0.00763
	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0065]
salesToEmp	0.00881	0.00884	0.0104	0.0101	0.00946	0.0103	0.00930
	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]
Obs	1327	1329	1331	1331	1331	1326	1334
R^2	0.098	0.092	0.084	0.086	0.088	0.085	0.091

Notes: Linear probability estimations with host-country, parent-location and industry dumnies in all columns. Panel A: Dependent variable: D_{ifim} : dummy for intra-firm imports. Panel B: Dependent variable: ifimToInp: share of intra-firm imports of production inputs in total value of production inputs. Panels A and B: Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, the quality of staff, AccFin: level of assistance provided by the parent in user of patents, trademarks, brand names, the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent in access to global markets, AssParOv: overall assistance of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 5: Impact of the assistance from the parent company in several areas on the extensive and intensive margin of intra-firm exports

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
D_{ifex}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0387^{***}	0.0441^{***}	0.000684	0.0283^{*}	0.0217	0.0481^{***}	0.0716^{***}
	[0.012]	[0.015]	[0.019]	[0.017]	[0.015]	[0.012]	[0.025]
numEmp	0.0331***	0.0332***	0.0340***	0.0337***	0.0332***	0.0339***	0.0332***
	[0.0071]	[0.0070]	[0.0070]	[0.0070]	[0.0071]	[0.0071]	[0.0070]
salesToEmp	0.0171***	0.0170***	0.0177***	0.0174***	0.0173***	0.0175***	0.0164***
	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]
Obs	1699	1708	1711	1710	1710	1703	1714
R^2	0.15	0.15	0.15	0.15	0.15	0.16	0.15
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
ifexToExp	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0688^{***}	0.0823^{***}	-0.0166	0.0529^{*}	0.0351	0.0381^{*}	0.101^{***}
	[0.021]	[0.025]	[0.030]	[0.027]	[0.023]	[0.021]	[0.037]
numEmp	0.0185	0.0163	0.0174	0.0159	0.0161	0.0157	0.0151
	[0.012]	[0.011]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
salesToEmp	0.0250^{**}	0.0246^{**}	0.0243^{**}	0.0236^{**}	0.0240^{**}	0.0266^{***}	0.0252^{**}
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
Obs	540	540	540	540	540	541	542
R^2	0.22	0.22	0.20	0.21	0.21	0.21	0.21

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: D_{ifex} : dummy for intra-firm exports. Panel B: Dependent variable: ifexToExp: share of intra-firm exports in total exports. Panels A and B: Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 6: Assistance from the parent company in several areas (intra-firm trade Vs production sharing with unaffiliated parties only)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.146^{***}	0.124^{***}	-0.0345	0.0634^{*}	0.0775^{**}	0.0964^{***}	0.192^{***}
	[0.027]	[0.034]	[0.031]	[0.033]	[0.034]	[0.027]	[0.052]
Obs	1388	1393	1395	1394	1395	1390	1398
$Pseudo - R^2$	0.18	0.17	0.16	0.16	0.17	0.17	0.17
Log - likelihood	-688.8	-699.6	-706.3	-705.1	-703.5	-696.3	-700.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with no trade and no local backward linkages (i.e., no production sharing) are excluded from the sample. Dependent variable: D_{iff} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 7: Assistance from the parent company in several areas (arm's length trade only Vs no trade but with local backward linkages)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{alt}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	-0.00388	-0.00834	-0.0402	-0.0323	0.0709^{**}	0.0149	0.00164
	[0.021]	[0.029]	[0.032]	[0.031]	[0.030]	[0.023]	[0.039]
Obs	676	680	680	679	681	677	681
$Pseudo - R^2$	0.25	0.25	0.25	0.25	0.26	0.25	0.25
Loq - likelihood	-231.0	-231.4	-230.7	-230.6	-227.7	-231.2	-231.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with intra-firm trade and those with no trade and no local backward linkages are excluded from the sample. Dependent variable: D_{att} : dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 8: Assistance from the parent company in several areas (production sharing with unaffiliated parties only Vs no production sharing)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
$D_{noTradeNoLBLink}$	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	-0.0297^{**}	0.0128	-0.0166	-0.0353*	-0.0454^{***}	-0.00782	-0.0497^{*}
	[0.014]	[0.017]	[0.019]	[0.019]	[0.013]	[0.014]	[0.027]
Obs	746	752	754	753	753	746	755
$Pseudo - R^2$	0.41	0.40	0.39	0.40	0.40	0.39	0.40
Log-likelihood	-254.0	-261.6	-264.9	-261.1	-261.0	-262.4	-263.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with intra-firm trade are excluded from the sample. Dependent variable: $D_{nOTradeNoLBLink}$: dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in technology and know-how, *QualWork*: level of assistance provided by the parent in access to finance, *ForSuppNet*: level of assistance provided by the parent in access to foreign supplier network, *GlMarketAcc*: level of assistance provided by the parent in access to global markets, *AssParOv*: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table 9: Source of finance of working capital (extensive and intensive margin)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
	-0.154^{***}	-0.0397*	-0.0275	-0.0180	-0.0709	-0.00711	0.0939	0.478^{***}
	[0.035]	[0.023]	[0.036]	[0.043]	[0.053]	[0.027]	[0.093]	[0.045]
Obs	1581	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.27
Log-likelihood	-718.4	-728.6	-729.8	-729.9	-729.2	-730.0	-729.5	-668.3
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
	-0.190***	-0.117**	-0.104	-0.101	-0.302	0.0769	0.363	0.776^{***}
	[0.042]	[0.057]	[0.11]	[0.14]	[0.23]	[0.077]	[0.23]	[0.070]
Obs	1562	1560	1558	1559	1558	1559	1558	1559
$Pseudo - R^2$	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.27
Log-likelihood	-711.4	-718.2	-718.4	-719.6	-717.3	-718.7	-717.4	-655.5

Table 10: Description of variables in main empirical analysis

Variable	Description
D_{ift}	the firm has intra-firm trade (imports, exports, or both) (dummy)
D_{ifim}	the firm has intra-firm imports (dummy)
D_{ifex}	the firm has intra-firm exports (dummy)
Difimex	the firm has both intra-firm imports and exports (dummy)
ifimToInp	share of intra-firm imports of production inputs in total value of production inputs
ifexToExp	share of intra-firm exports in total exports
D_{alt}	the firm has arm's length trade only (dummy)
$D_{noTradeNoLBLink}$	the firm has no trade and no local backward linkages (dummy)
skillInt	skill intensity
capInt	capital intensity
numEmp	total number of employees (firm size)
wageEmp	wage per employee
labProd	labour productivity
inpInt	input intensity
$D_{training}$	the firm provides formal internal/external training to its employees (dummy)
UsePat	level of assistance provided by the parent in use of patents, trademarks, brand names
TechTrans	level of assistance provided by the parent in technology and know-how
QualWork	level of assistance provided by the parent in upgrading the quality of staff
AccFin	level of assistance provided by the parent in access to finance
For SuppNet	level of assistance provided by the parent in access to foreign supplier network
GlMarketAcc	level of assistance provided by the parent in access to global markets
AssParOv	overall assistance provided by the parent
$D_{WCIntFund}$	source of finance of WC: internal funds/retained earnings (dummy)
$D_{WCBorBankIns}$	source of finance of WC: borrow from banks in the host country (dummy)
$D_{WCBorBankOuts}$	source of finance of WC: borrow from banks outside the host country (dummy)
$D_{WCBorFam}$	source of finance of WC: borrow from family/friends/individual lenders (dummy)
$D_{WCBotNonBank}$	source of finance of WC: borrow from non-bank financial institutions (e.g. equity funds) (dummy)
$D_{WCPurchCredit}$	source of finance of WC: through purchases on credit from suppliers and advances from customers (dummy)
$D_{WCIssNewEq}$	source of finance of WC: through new equity shares or new debt (including commercial paper and debentures) (dummy)
$D_{WCParent}$	source of finance of WC: parent company (dummy)
WCIntFund	share of finance from internal funds/retained earnings
WCB or Bank Ins	share of finance of WC: borrowed funds from banks in the host country
WCB or BankOuts	share of finance of WC: borrowed funds from banks outside the host country
WCBorFam	share of finance of WC: borrowed funds from family/friends/individual lenders
WCBotNonBank	share of finance of WC: borrowed funds from non-bank financial institutions (e.g. equity funds)
WCPurchCredit	share of finance of WC: funds raised through purchases on credit from suppliers and advances from customers
WCIssNewEq	share of finance of WC: funds raised through new equity shares or new debt (including commercial paper and debentures)
WCParent	share of finance of WC: funds received from the parent company

Appendix: Additional stylised facts Α

Table A1: Summary statistics for assistance received from the parent (sample with non-missing observations for either intra-firm imports or exports)

		with int	е	without intra-firm trade						
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	509	4.6	1.4	1	6	1102	3.9	1.7	1	6
TechTrans	511	4.7	1.2	1	6	1103	4.4	1.4	1	6
QualWork	510	4.1	1.3	1	6	1104	4.2	1.3	1	6
AccFin	512	4.8	1.2	1	6	1104	4.6	1.3	1	6
For SuppNet	510	4.7	1.2	1	6	1105	4.4	1.4	1	6
GlMarketAcc	509	4.6	1.4	1	6	1097	4	1.7	1	6
AssParOv	513	4.6	0.9	1	6	1106	4.2	1.1	1	6

Notes: Authors' calculations. Firms with intra-firm trade are those with either intra-firm imports, or intra-firm exports or both. UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, Exports of both. Oser al. level of assistance provided by the parent in technology and know-how, QuadWork: level of assistance provided by the parent in technology and know-how, QuadWork: level of assistance provided by the parent in access to finance, ForSupNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance

provided by the parent. Source: UNIDO Africa Investor Survey 2010.

Table A2: Summary statistics for assistance received from the parent (sample with non-missing observations for both intra-firm imports and exports)

		with int	ra-firi	m trad	without intra-firm trade					
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	269	4.6	1.4	1	6	337	4	1.7	1	6
TechTrans	269	4.7	1.2	1	6	337	4.3	1.4	1	6
QualWork	269	4.1	1.3	1	6	337	4.1	1.3	1	6
AccFin	270	4.9	1.2	1	6	336	4.7	1.3	1	6
For SuppNet	269	4.7	1.3	1	6	337	4.4	1.3	1	6
GlMarketAcc	270	4.8	1.4	1	6	337	4.4	1.5	1	6
AssParOv	271	4.6	0.9	1	6	337	4.3	1.1	1	6

Notes: Authors' calculations. Firms with intra-firm trade are those with either intra-firm imports, or intrafirm exports or both. UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier $network, \ GlMarket Acc: \ level \ of \ assistance \ provided \ by \ the \ parent \ in \ access \ to \ global \ markets, \ AssParOv: \ overall \ add \ add$ assistance provided by the parent. Source: UNIDO Africa Investor Survey 2010.

Table A3.	Summary	statistics f	for assistance	received from	the parent h	ov sector
10010 110.	Summary	Statistics I	tor approvance	received from	une parene i	Jy becou

Panel A	Agriculture									
	with intra-firm trade without intra-firm trade									
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	47	4.3	1.6	1	6	63	3.6	1.8	1	6
TechTrans	47	4.3	1.6	1	6	63	3.9	1.5	1	6
QualWork	46	3.9	1.4	1	6	63	4	1.3	1	6
AccFin	47	5	1.2	1	6	63	4.8	1.3	1	6
For SuppNet	47	4.6	1.3	1	6	63	4.1	1.5	1	6
GlMarketAcc	47	4.9	1.3	1	6	63	4.2	1.6	1	6
AssParOv	48	4.5	1	1.8	6	63	4.1	1	1.2	5.5
Panel B	Mi					ning				
	with intra-firm trade without						ithout ir	ıtra-fi	rm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	17	4.6	1.6	1	6	30	4	1.9	1	6
TechTrans	17	4.6	1.5	1	6	31	4.6	1.3	1	6
QualWork	17	4.4	1.4	2	6	31	4.1	1.3	1	6
AccFin	17	5	1.4	1	6	31	4.8	1.2	1	6
For SuppNet	17	4.9	1	3	6	31	4.6	1.1	2	6
GlMarketAcc	17	4.6	1.7	1	6	30	4.3	1.5	1	6
AssParOv	17	4.7	1	2	6	31	4.4	1	2	6
Panel C	Manufacturing									
		with int	ra-firi	m trad	e	W	ithout in	ıtra-fi	rm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	321	4.6	1.4	1	6	766	4	1.6	1	6
TechTrans	321	4.8	1.1	1	6	768	4.4	1.3	1	6
QualWork	321	4	1.3	1	6	767	4.2	1.3	1	6
AccFin	322	4.7	1.2	1	6	767	4.5	1.3	1	6
For SuppNet	320	4.7	1.3	1	6	768	4.3	1.4	1	6
GlMarketAcc	321	4.5	1.5	1	6	766	4	1.7	1	6
AssParOv	322	4.5	0.9	1	6	769	4.3	1.1	1	6
Panel D			EC	JW su	pply ai	nd Cor	istructio	n		,
X 7 · 1 1		with intra-firm trade				W	ithout intra-firm trade			
Variable	Obs	Mean	Sd	Min	Max	Ubs 10C	Mean	Sd	Min	Max
U sePat	27	5	1.4	1	6	100	4.2	1.0	1	6
1 ecn1 rans	28	4.9	0.9	う 1	0	100	4.5	1.4	1	0
Qual W ork	28	4.5	1.2	1	0 C	107	4.4	1.0	1	0
AccF in E on Cump Not	28	0.0 4.0	1 5	2	0	107	4.0	1.3	1	0
Cl Manhat Aco	20	4.9 E	1.0	1	6	100	4	1.0	1	6
GIMUTKELACC	20		1.4	1 2 E	6	104	4	1.1	1	6
Assr arOv	20	4.9	0.9	2.0	Com	107	4.5	1.1	1	0
Fallel E		with int	ra-firi	m trad	e Serv	vices w	ithout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	97	4.6	1.4	1	6	775	3.9	1.8	1	6
TechTrans	98	4.6	1.1	1	6	784	4.3	1.4	1	6
QualWork	98	4.1	1.2	1	6	783	4.1	1.3	1	ő
AccFin	98	4.6	1.2	1	6	782	4.5	1.4	1	ő
ForSuppNet	98	4.7	1	1	6	781	4.2	1.5	1	6
<i>GlMarketAcc</i>	96	4.6	1.4	1	6	771	4.1	1.7	1	6
AssParOv	98	4.5	0.8	1	6	788	4.2	1	1	6
	. •			-				-	-	
Panel A	High-income (HI) countries									
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		with int	ra-firi	m trad	е	W	ithout in	ntra-fi	irm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	263	4.6	1.4	1	6	829	3.9	1.8	1	6
TechTrans	263	4.6	1.2	1	6	834	4.4	1.4	1	6
QualWork	263	4	1.3	1	6	835	4.1	1.3	1	6
AccFin	263	4.7	1.3	1	6	834	4.5	1.4	1	6
For SuppNet	263	4.7	1.3	1	6	832	4.2	1.5	1	6
GlMarketAcc	262	4.7	1.4	1	6	825	4.1	1.7	1	6
AssParOv	264	4.6	0.9	1	6	837	4.2	1.1	1	6
Panel B		Non-SSA low/middle-income (LMI) countries								
		with int	ra-firi	m trad	e	W	ithout in	ntra-fi	irm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	161	4.7	1.4	1	6	625	4.1	1.6	1	6
TechTrans	163	4.8	1.1	1	6	630	4.5	1.3	1	6
QualWork	163	4.1	1.3	1	6	631	4.2	1.2	1	6
AccFin	164	4.8	1.2	1	6	630	4.6	1.3	1	6
For SuppNet	163	4.8	1.3	1	6	631	4.3	1.4	1	6
GlMarketAcc	163	4.5	1.5	1	6	625	4	1.7	1	6
AssParOv	164	4.6	0.9	1	6	633	4.3	1	1	6
Panel C			Sub-S	Sahara	n Afric	an (SS	A) cour	ntries		
		with int	ra-firi	m trad	е	W	ithout in	ntra-fi	irm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	71	4.3	1.3	1	6	226	3.8	1.7	1	6
TechTrans	71	4.6	1.1	1	6	227	4.3	1.2	1	6
QualWork	70	4.1	1.2	1	6	225	4.2	1.2	1	6
AccFin	71	4.6	1.1	1	6	226	4.6	1.3	1	6
For SuppNet	71	4.6	1.2	1	6	226	4.3	1.4	1	6
GlMarketAcc	71	4.2	1.5	1	6	225	4	1.7	1	6
AssParOv	71	4.4	0.7	2.5	6	227	4.2	1	1	6

Table A4: Summary statistics for assistance received from the parent by its origin

Notes: Authors' calculations. Firms with intra-firm trade are those with either intra-firm imports, or intra-firm exports or both. SSA: Foreign investors' country of origin is in sub-Saharan Africa. Foreign investors' country of origin is classified as high-income (HI) and non-SSA low/middle-income (LMI) based on the World Bank historical country classification for the year 2010. Low/Middle-income countries are those which are classified by the World Bank for the corresponding year as either low-income, or lower-middle-income, or upper-middle-income. UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets. AssParQv: overall assistance provided by the parent in access to global markets. of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Source: UNIDO Africa Investor Survey 2010.

Table A5: Summary statistics for assistance received from a parent located in a high-income country by sector

Panel A	Agriculture									
	,	with int	ra-firi	n trad	e	wi	thout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	34	4.1	1.6	1	6	37	3.5	1.9	1	6
TechTrans	34	4.1	1.7	1	6	37	3.9	1.7	1	6
QualWork	34	3.7	1.5	1	6	37	4.1	1.4	1	6
AccFin	34	5	1.3	1	6	37	4.8	1.4	1	6
For SuppNet	34	4.6	1.4	1	6	37	4.1	1.6	1	6
GlMarketAcc	34	5.1	1.3	1	6	37	4.3	1.8	1	6
AssParOv	35	4.4	1.1	1.8	6	37	4.1	1.1	1.2	5.5
Panel B					Mir	ning				
	with intra-firm trade without intra-firm trade									de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	8	4.8	1.8	1	6	16	4.3	1.9	1	6
TechTrans	8	4.8	1.8	1	6	17	4.9	1.1	3	6
QualWork	8	4.4	1.8	2	6	17	4.2	1.1	2	6
AccFin	8	5	1.7	1	6	17	5.2	1.1	3	6
For SuppNet	8	4.9	1.2	3	6	17	4.8	1.2	2	6
GlMarketAcc	8	5	1.2	3	6	16	4.8	1	3	6
AssParOv	8	4.8	1.3	2	6	17	4.7	0.8	3.3	6
Panel C	Manufacturing									
	,	with int	ra-firi	n trad	e	wi	ithout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	161	4.7	1.3	1	6	331	3.9	1.7	1	6
TechTrans	161	4.7	1.1	1	6	331	4.4	1.4	1	6
QualWork	161	4	1.3	1	6	331	4.2	1.3	1	6
AccFin	161	4.7	1.2	1	6	330	4.5	1.4	1	6
For SuppNet	161	4.7	1.3	1	6	331	4.3	1.4	1	6
GlMarketAcc	161	4.6	1.4	1	6	331	4	1.7	1	6
AssParOv	161	4.6	0.9	1	6	331	4.2	1.1	1	6
Panel D			EC	GW su	pply a	nd Cor	structio	n		
		with int	ra-firi	n trad	e	wi	thout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	14	5.1	0.8	4	6	56	4	1.7	1	6
TechTrans	14	5	0.9	3	6	55	4.7	1.3	1	6
QualWork	14	4.3	0.7	3	5	56	4.4	1.2	1	6
AccFin	14	5	1.2	2	6	56	4.6	1.3	1	6
For SuppNet	14	4.8	1.3	2	6	55	4.2	1.5	1	6
GlMarketAcc	14	4.9	1.4	2	6	54	4	1.7	1	6
AssParOv	14	4.8	0.8	2.8	5.8	56	4.3	1	1.5	6
Panel E					Serv	vices		_		
		with int	ra-firi	n trad	е	wi	thout ir	itra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	46	4.5	1.5	1	6	389	3.9	1.8	1	6
TechTrans	46	4.6	1.3	1	6	394	4.4	1.4	1	6
QualWork	46	4.3	1.1	1	6	394	4.1	1.3	1	6
AccFin	46	4.7	1.2	1	6	394	4.5	1.4	1	6
For SuppNet	46	4.7	1	1	6	392	4.2	1.6	1	6
GlMarketAcc	45	4.6	1.5	1	6	387	4.2	1.7	1	6
AssParOv	46	4.6	0.9	1.8	6	396	4.2	1	1	6

Table A6: Summary statistics for assistance received from a parent located in a non-SSA low/middle-income country by sector

Panel A	Agriculture									
	,	with int	ra-firi	n trad	е	wi	ithout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	6	5.2	1.6	2	6	12	3.2	1.7	1	6
TechTrans	6	4.8	1.2	3	6	12	4	1.8	1	6
QualWork	6	4.5	1.5	2	6	12	3.5	1.5	1	5
AccFin	6	5.3	0.8	4	6	12	4.4	1.4	1	6
For SuppNet	6	4.7	1	4	6	12	3.8	1.5	1	6
GlMarketAcc	6	4.7	1.2	3	6	12	4.2	1.1	2	6
AssParOv	6	4.9	0.8	3.8	5.7	12	3.8	1.1	1.8	5.5
Panel B					Mir	ning				
		with int	ra-firi	n trad	е	wi	thout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	$\overline{7}$	4.3	1.5	2	6	13	3.6	2	1	6
TechTrans	$\overline{7}$	4.3	1.5	2	6	13	4.2	1.4	1	6
QualWork	$\overline{7}$	4.6	1	3	6	13	3.8	1.5	1	5
AccFin	7	4.9	1.2	3	6	13	4.4	1.4	1	6
For SuppNet	7	5.1	0.7	4	6	13	4.5	1	3	6
GlMarketAcc	7	3.9	2.1	1	6	13	3.7	1.8	1	6
AssParOv	7	4.5	0.6	3.5	5.5	13	4	1.2	2	5.8
Panel C		Manufacturing								
		with int	ra-firi	n trad	е	wi	thout ir	ntra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	110	4.7	1.4	1	6	325	4.2	1.5	1	6
TechTrans	110	4.9	1.1	1	6	326	4.6	1.2	1	6
QualWork	110	4	1.4	1	6	327	4.3	1.2	1	6
AccFin	111	4.8	1.2	1	6	327	4.6	1.2	1	6
For SuppNet	110	4.7	1.3	1	6	327	4.5	1.2	1	6
GlMarketAcc	111	4.3	1.6	1	6	327	4.1	1.6	1	6
AssParOv	111	4.6	0.9	1	6	327	4.4	1	1	6
Panel D			EC	GW su	pply a	nd Cor	structio	n -		
		with int	ra-firi	n trad	e	W	ithout ir	ıtra-fi	rm tra	de
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	9	5.7	0.7	4	6	38	4.4	1.6	1	6
TechTrans	10	4.9	1.1	3	6	39	4.4	1.4	1	6
QualWork	10	4.3	1.5	2	6	39	4.3	1.3	1	6
AccFin	10	5.9	0.3	5	6	39	4.7	1.3	1	6
ForSuppNet	10	5.3	1.6	1	6	39	3.8	1.8	1	6
GlMarketAcc	10	5.1	1.6	1	6	38	3.9	1.8	1	6
AssParOv	10	5.2	0.7	3.8	6	39	4.2	1.1	2.2	6
Panel E		with int	ro firi	n trod	Serv	nces	thout in	otro fi	rno tro	do
Variable	Obs	Moon	sd	Min	Mov	Obs	Moon	Sd	Min	Max
UsePat	20	1 6	1 5	1	б	237	2 0	17	1	б
TechTrans	29	4.0	1.0	1	6	237	0.9 4 3	1.7	1	6
QualWork	30	ч.0 Д	1 9	1	6	240 240	ч.5 4 2	1.4	1	6
AccFin	30	-± 4 4	15	1	6	240	4.5	1.0 1.2	1	6
ForSumNet	30	47	1.0	1	6	$\frac{233}{240}$	4.9	1.5	1	6
GIMarket Acc	29	5	1.2	1	6	235	3.9	1.0	1	6
AssParOn	30	4.6	0.9	1	6	200	4.2	11	1	6
11001 01 010	00	1.0	0.0	T	0	4-14	7.4	1.1	T	0

Notes: Authors' calculations. Firms with intra-firm trade are those with either intra-firm imports, or intra-firm exports or both. Agriculture industry codes: 1-5. Mining industry codes: 10-14. Manufacturing industry codes: 15-39. Resource-based manufacturing industry codes: 5, 16, 20, 21, 23, 25, 26, 27. Low-tech manufacturing industry codes: 17, 18, 19, 22, 28, 36. High- and medium-tech manufacturing industry codes: 24, 29, 30, 31, 32, 33, 34, 35, 37, 38. Electricity, Gas and Water (EGW) supply industry code: 40. Construction industry code: 50-99. Foreign investors' country of origin is classified as non-SSA low/middle-income (LMI) based on the World Bank historical country classification for the year 2010. Low/Middle-income (cultile-income. UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Source: UNIDO Africa Investor Survey 2010.

Table A7: Summary statistics for assistance received from a parent located in an SSA country by sector

Panel A	Agriculture									
	,	with int	ra-firi	n trad	e	W	ithout ir	ntra-fi	irm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	6	4.5	1.5	2	6	11	4.2	1	2	5
TechTrans	6	4.7	0.8	4	6	11	3.7	0.8	2	5
QualWork	5	4.4	0.9	3	5	11	3.9	0.8	2	5
AccFin	6	5	0.6	4	6	11	4.9	0.7	4	6
For SuppNet	6	4.3	0.8	3	5	11	4.5	1	3	6
GlMarketAcc	6	4.2	1.3	2	6	11	3.9	1.5	1	6
AssParOv	6	4.5	0.5	4	5	11	4.2	0.5	3.7	5
Panel B	Manufacturing									
	with intra-firm trade without intra-firm trade									
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	42	4.3	1.3	1	6	87	3.8	1.7	1	6
TechTrans	42	4.8	1	2	6	87	4.3	1.2	1	6
QualWork	42	4.3	1.1	1	6	86	4.1	1.3	1	6
AccFin	42	4.5	1.2	1	6	87	4.4	1.5	1	6
For SuppNet	42	4.6	1.2	1	6	87	4.1	1.4	1	6
GlMarketAcc	42	4.1	1.6	1	6	86	3.9	1.8	1	6
AssParOv	42	4.4	0.8	2.5	6	87	4.1	1.2	1	6
Panel C			EC	GW su	pply ar	nd Cor	nstructio	n		
		with int	ra-firi	n trad	е	W	ithout ir	ntra-fi	irm tra	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	4	3	2.3	1	5	8	4.4	0.7	3	5
TechTrans	4	4.8	1	4	6	8	4.6	0.7	4	6
QualWork	4	4	2.2	1	6	8	5	0.8	4	6
AccFin	4	4.8	1	4	6	8	4.9	0.8	3	6
For SuppNet	4	4.3	2.2	1	6	8	4.4	0.9	3	6
GlMarketAcc	4	4.8	1	4	6	8	4.1	1.2	2	6
AssParOv	4	4.3	1.2	2.5	5.2	8	4.6	0.5	3.7	5.2
Panel D					Serv	vices				
		with int	ra-firi	n trad	е	W	ithout ir	ntra-fi	irm trε	ıde
Variable	Obs	Mean	Sd	Min	Max	Obs	Mean	Sd	Min	Max
UsePat	19	4.6	1	2	6	120	3.8	1.7	1	6
TechTrans	19	4.1	1.1	1	5	121	4.3	1.2	1	6
QualWork	19	3.7	1.3	1	6	120	4.2	1.1	1	6
AccFin	19	4.7	0.9	3	6	120	4.6	1.2	1	6
For SuppNet	19	4.7	0.9	3	6	120	4.3	1.4	1	6
GlMarketAcc	19	4.1	1.3	1	6	120	4.1	1.6	1	6
AssParOv	19	4.3	0.6	3	5.2	121	4.2	0.8	1	6

parent. Source: UNIDO Africa Investor Survey 2010.

Figure A1: Assistance from the parent in the use of patents, trademarks, brand names (kernel density)



Figure A2: Assistance from the parent in the use of patents, trademarks, brand names (percentile distribution)





Figure A3: Assistance from the parent through technology and know-how transfer (kernel density)

Figure A4: Assistance from the parent through technology and know-how transfer (percentile distribution)



Figure A5: Assistance from the parent in upgrading worker quality (kernel density)



Figure A6: Assistance from the parent in upgrading worker quality (percentile distribution)







Figure A8: Assistance from the parent in access to finance (percentile distribution)



Figure A9: Assistance from the parent in foreign supplier network access (kernel density)



Figure A10: Assistance from the parent in foreign supplier network access (percentile distribution)





Figure A11: Assistance from the parent in global market access (kernel density)

Figure A12: Assistance from the parent in global market access (percentile distribution)



	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}
skillInt	-0.0216	-0.0203	-0.0154	-0.0166	-0.0164	-0.0156	-0.0195
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
capInt	-0.00696	-0.00660	-0.00529	-0.00712	-0.00571	-0.00759	-0.00773
	[0.0077]	[0.0078]	[0.0078]	[0.0078]	[0.0078]	[0.0078]	[0.0078]
numEmp	0.0428***	0.0439***	0.0470***	0.0454^{***}	0.0439***	0.0442***	0.0430***
	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]
wageEmp	0.0133	0.0158	0.0155	0.0156	0.0152	0.0139	0.0149
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
labProd	0.0295***	0.0302***	0.0323***	0.0316***	0.0312***	0.0322***	0.0303***
	[0.0099]	[0.0100]	[0.010]	[0.010]	[0.0100]	[0.0098]	[0.0099]
inpInt	0.00516	0.00472	0.00317	0.00353	0.00372	0.00407	0.00493
	[0.0080]	[0.0080]	[0.0081]	[0.0081]	[0.0080]	[0.0079]	[0.0079]
$D_{training}$ (d)	0.0197	0.0176	0.0240	0.0220	0.0200	0.0254	0.0193
	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]
UsePat	0.126***		. ,		. ,		
	[0.023]						
TechTrans		0.0994^{***}					
		[0.029]					
QualWork			-0.0337				
			[0.027]				
AccFin				0.0547^{*}			
				[0.028]			
For SuppNet					0.0679^{**}		
					[0.030]		
GlMarketAcc						0.0821^{***}	
						[0.023]	
assParOv						. ,	0.163^{***}
							[0.045]
Obs	1543	1552	1555	1554	1554	1547	1558
$Pseudo - R^2$	0.22	0.21	0.20	0.20	0.21	0.21	0.21
Log-likelihood	-702.5	-714.9	-720.5	-719.7	-717.9	-710.4	-714.9

Table B1: Assistance from the parent company in several areas - full-length table

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to forable markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B2: Assistance from the parent company in several areas (dummies for values of importance of assistance greater than 3) - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}						
skillInt	-0.0189	-0.0173	-0.0149	-0.0153	-0.0154	-0.0145	-0.0156
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
capInt	-0.00615	-0.00721	-0.00535	-0.00665	-0.00594	-0.00704	-0.00683
	[0.0076]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]
numEmp	0.0459^{***}	0.0461^{***}	0.0480^{***}	0.0465^{***}	0.0462^{***}	0.0459^{***}	0.0464^{***}
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
wageEmp	0.0155	0.0167	0.0166	0.0172	0.0168	0.0164	0.0157
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
salesToEmp	0.0315***	0.0319***	0.0331***	0.0326***	0.0325***	0.0329***	0.0325***
	[0.0098]	[0.0099]	[0.0100]	[0.0099]	[0.0099]	[0.0098]	[0.0099]
inpInt	0.00580	0.00581	0.00394	0.00444	0.00478	0.00400	0.00472
	[0.0079]	[0.0079]	[0.0081]	[0.0080]	[0.0080]	[0.0080]	[0.0079]
$D_{training}$ (d)	0.0188	0.0189	0.0221	0.0203	0.0194	0.0235	0.0190
	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]
$D_{UsePatHigh}$ (d)	0.101***						
	[0.022]						
$D_{TechTransHigh}$ (d)		0.0785^{***}					
		[0.026]					
$D_{QualWorkHigh}$ (d)			-0.0274				
			[0.026]				
$D_{AccFinHigh}$ (d)			. ,	0.0447			
				[0.028]			
$D_{AccForSuppNetHigh}$ (d)				. ,	0.0383		
					[0.027]		
$D_{GlMarketAccHigh}$ (d)					. ,	0.0772^{***}	
······································						[0.023]	
$D_{assParOvHigh}$ (d)						. ,	0.0818***
							[0.029]
Obs	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Log - likelihood	-721.4	-726.4	-729.5	-728.9	-729.1	-725.1	-726.7

 $\frac{120.7}{120.7} = \frac{120.7}{120.7} = \frac{120.7}{120.5} = \frac{120.7}{120.5} = \frac{120.7}{120.1} = \frac{120.1}{120.1}$ Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: $D_{usePatHigh}(D_{usePatLow})$: level of assistance provided by the parent in use of patents, trademarks, brand names greater than (no greater than) 3, $D_{TechTransHigh}(D_{TechTransLow})$: level of assistance provided by the parent in technology and know-how greater than (no greater than) 3, $D_{TechTransLow}$): level of assistance provided by the quality of staff greater than (no greater than) 3, $D_{LospTinHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{ForSupNetHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{GuMarketAccHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{GuMarketAccHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{GuMarketAccHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{GuMarketAccHigh}$: level of assistance provided by the parent in access to foreign supplier network greater than (no greater than) 3, $D_{GuMarketAccHigh}$: level of assistance provided by the parent greater than (no greater than) 3, $D_{AssParOvHigh}$: level of overlate supplier network greater than (no greater than) (no to 1. All variables are in logs except for dummies.

Table B3: Assistance from the parent company in several areas (dummies for values of importance of assistance no greater than 3) - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}						
skillInt	-0.0187	-0.0172	-0.0147	-0.0154	-0.0154	-0.0151	-0.0157
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
capInt	-0.00577	-0.00696	-0.00527	-0.00627	-0.00587	-0.00694	-0.00652
	[0.0076]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]
numEmp	0.0458^{***}	0.0465^{***}	0.0480^{***}	0.0470^{***}	0.0467^{***}	0.0460^{***}	0.0469^{***}
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
wageEmp	0.0161	0.0170	0.0164	0.0173	0.0169	0.0167	0.0161
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
salesToEmp	0.0322^{***}	0.0325^{***}	0.0329^{***}	0.0329^{***}	0.0328^{***}	0.0333^{***}	0.0329^{***}
	[0.0098]	[0.0099]	[0.0100]	[0.0099]	[0.0099]	[0.0098]	[0.0099]
inpInt	0.00543	0.00550	0.00387	0.00435	0.00463	0.00400	0.00464
	[0.0079]	[0.0080]	[0.0081]	[0.0080]	[0.0080]	[0.0080]	[0.0080]
$D_{training}$ (d)	0.0196	0.0202	0.0218	0.0211	0.0204	0.0238	0.0200
	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]
$D_{UsePatLow}$ (d)	-0.0973***						
	[0.023]						
$D_{TechTransLow}$ (d)		-0.0699**					
		[0.028]					
$D_{QualWorkBelow}$ (d)			0.0376				
			[0.027]				
$D_{AccFinLow}$ (d)				-0.0298			
				[0.030]			
$D_{AccForSuppNetLow}$ (d)					-0.0284		
					[0.029]		
$D_{GlMarketaccBelow}$ (d)						-0.0699***	
						[0.024]	
$D_{assParOvLow}$ (d)							-0.0703**
							[0.031]
Obs	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Log - likelihood	-722.2	-727.4	-729.1	-729.6	-729.6	-726.2	-727.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: $D_{UsePatLow}$: level of assistance provided by the parent in use of patents, trademarks, brand names no greater than 3, $D_{TechTransLow}$: level of assistance provided by the parent in technology and know-how or greater than 3, $D_{QualWorkLow}$: level of assistance provided by the parent in access to finance no greater than 3, $D_{ForSuppNetLow}$: level of assistance provided by the parent in access to finance no greater than 3, $D_{ForSuppNetLow}$: level of assistance provided by the parent in access to global markets no greater than 3, $D_{AesParOvLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AesParOvLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AesParOvLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AesParOvLow}$: level of overall assistance provided by the parent no greater than 3. (Distance provided by the parent in access to global markets no greater than 3, $D_{AesParOvLow}$: level of overall assistance provided by the parent no greater than 3. (Distance provided by the parent no greater than 3. (Distance provided by the parent no greater than 3. (Distance provided by the parent no greater than 3. (Distance provided by the parent no greater than 3. (Distance provided by the parent no greater than 3. (Distance) for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B4: Impact of the assistance from the parent company in several areas on the extensive margin of intra-firm imports - full-length table

	(1)	(2)	(2)	(1)	(~)	(0)	(=)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ifim}	D_{ifim}	D_{ifim}	D_{ifim}	D_{ifim}	D_{ifim}	D_{ifim}
skillInt	-0.00219	-0.000976	0.000417	-0.000336	-0.000140	0.0000126	-0.00103
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
capInt	-0.00619	-0.00613	-0.00562	-0.00733	-0.00601	-0.00595	-0.00698
	[0.0068]	[0.0068]	[0.0067]	[0.0068]	[0.0068]	[0.0068]	[0.0068]
numEmp	0.0210^{**}	0.0230**	0.0243^{***}	0.0236^{***}	0.0224^{**}	0.0245^{***}	0.0231^{**}
	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]
wageEmp	0.0150	0.0164	0.0160	0.0164	0.0164	0.0152	0.0155
	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]
sales To Emp	0.0179^{**}	0.0184^{**}	0.0194^{**}	0.0196^{**}	0.0185^{**}	0.0188^{**}	0.0181^{**}
	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]	[0.0084]
inpInt	0.00904	0.00840	0.00759	0.00783	0.00784	0.00909	0.00979
	[0.0074]	[0.0074]	[0.0074]	[0.0074]	[0.0074]	[0.0075]	[0.0074]
$D_{training}$	0.0276	0.0270	0.0333	0.0325	0.0293	0.0310	0.0283
-	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]
UsePat	0.0769^{***}						
	[0.016]						
TechTrans	. ,	0.0596^{***}					
		[0.020]					
QualWork		. ,	-0.0385				
-			[0.024]				
AccFin				0.0462**			
				[0.021]			
For SuppNet					0.0469**		
					[0.020]		
GlMarketAcc					r 1	0.0358**	
						[0.016]	
assParOv						. J	0.0973***
							[0.029]
Obs	1699	1708	1711	1710	1710	1703	1714
R^2	0.12	0.11	0.11	0.11	0.11	0.11	0.11

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifim} : dummy for intra-firm imports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in technology and know-how, *QualWork*: level of assistance provided by the parent in access to finance, *ForSuppNet*: level of assistance provided by the parent in access to foreign supplier network, *GlMarketAcc*: level of assistance provided by the parent in access to global markets, *AssParOv*: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B5: Impact of the assistance from the parent company in several areas on the intensive margin of intra-firm imports - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Difim ToImm	DifimToInn	DifimToInn	Difim Tolon	DifimToInn	DifimToInn	Difim ToInn
skillInt	0.000108	-0.0000540	0.00227	0.00145	0.00178	0.00296	0.000463
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
capInt	-0.00231	-0.00186	-0.00101	-0.00227	-0.00114	-0.00128	-0.00223
1	[0.0047]	[0.0047]	[0.0047]	[0.0047]	[0.0047]	[0.0047]	[0.0047]
numEmp	0.00761	0.00754	0.00893	0.00831	0.00790	0.00853	0.00763
-	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0066]	[0.0065]
wageEmp	0.0163**	0.0178**	0.0174**	0.0171**	0.0171**	0.0165**	0.0167**
	[0.0070]	[0.0070]	[0.0071]	[0.0071]	[0.0071]	[0.0071]	[0.0071]
salesToEmp	0.00881	0.00884	0.0104	0.0101	0.00946	0.0103	0.00930
	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]	[0.0063]
inpInt	0.00262	0.00222	0.000806	0.00126	0.00145	0.00153	0.00234
	[0.0054]	[0.0054]	[0.0054]	[0.0054]	[0.0054]	[0.0053]	[0.0053]
$D_{training}$	0.0182	0.0166	0.0201	0.0200	0.0177	0.0202	0.0186
	[0.013]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.013]
UsePat	0.0594^{***}						
	[0.012]						
TechTrans		0.0548^{***}					
		[0.015]					
QualWork			-0.0235				
			[0.017]				
AccFin				0.0359^{**}			
				[0.016]			
For SuppNet					0.0390**		
~					[0.016]		
GlMarketAcc						0.0292**	
D 0						[0.012]	0 001 (***
assParOv							0.0814***
	1007	1990	1001	1001	1001	1996	[0.022]
Ubs	1327	1329	1331	1331	1331	1326	1334
K*	0.098	0.092	0.084	0.086	0.088	0.085	0.091

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: ifmToInp: share of intra-firm imports of production inputs in total value of production inputs. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B6: Impact of the assistance from the parent company in several areas on the extensive margin of intra-firm exports - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ifex}	D_{ifex}	D_{ifex}	D_{ifex}	D_{ifex}	D_{ifex}	D_{ifex}
skillInt	-0.00754	-0.00690	-0.00618	-0.00647	-0.00618	-0.00624	-0.00706
	[0.0094]	[0.0094]	[0.0094]	[0.0094]	[0.0095]	[0.0094]	[0.0094]
capInt	-0.00225	-0.00227	-0.00204	-0.00291	-0.00215	-0.00313	-0.00273
	[0.0052]	[0.0053]	[0.0052]	[0.0053]	[0.0052]	[0.0052]	[0.0052]
numEmp	0.0331***	0.0332***	0.0340***	0.0337***	0.0332***	0.0339***	0.0332***
	[0.0071]	[0.0070]	[0.0070]	[0.0070]	[0.0071]	[0.0071]	[0.0070]
wageEmp	-0.00119	-0.000507	-0.000319	-0.000289	-0.000577	-0.00198	-0.00105
	[0.0089]	[0.0089]	[0.0089]	[0.0089]	[0.0089]	[0.0089]	[0.0089]
salesToEmp	0.0171***	0.0170***	0.0177***	0.0174***	0.0173***	0.0175***	0.0164***
	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]	[0.0061]
inpInt	-0.00126	-0.00134	-0.00185	-0.00190	-0.00179	-0.000683	-0.000664
	[0.0054]	[0.0054]	[0.0054]	[0.0054]	[0.0054]	[0.0054]	[0.0054]
$D_{training}$	-0.0243	-0.0266	-0.0231	-0.0245	-0.0242	-0.0227	-0.0270
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]	[0.017]
UsePat	0.0387^{***}						
	[0.012]						
TechTrans		0.0441^{***}					
		[0.015]					
QualWork			0.000684				
			[0.019]				
AccFin				0.0283^{*}			
				[0.017]			
For SuppNet					0.0217		
					[0.015]		
GlMarketAcc						0.0481^{***}	
						[0.012]	
assParOv						. ,	0.0716^{***}
							[0.025]
Obs	1699	1708	1711	1710	1710	1703	1714
\mathbb{R}^2	0.15	0.15	0.15	0.15	0.15	0.16	0.15

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifex} : dummy for intra-firm exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in technology and know-how, *QualWork*: level of assistance provided by the parent in access to finance, *ForSuppNet*: level of assistance provided by the parent in access to foreign supplier network, *GlMarketAcc*: level of assistance provided by the parent in access to global markets, *AssParOv*: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B7: Impact of the assistance from the parent company in several areas on the intensive margin of intra-firm exports - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$D_{iferToErr}$	$D_{iferToFm}$	$D_{iferToFm}$	$D_{iferToFm}$	$D_{iferToFm}$	$D_{iferToFm}$	$D_{iferToErr}$
skillInt	-0.00927	-0.0114	-0.00434	-0.00661	-0.00670	-0.00593	-0.00864
	[0.014]	[0.014]	[0.015]	[0.015]	[0.014]	[0.014]	[0.014]
capInt	-0.0117	-0.0130*	-0.0108	-0.0129	-0.0112	-0.0144*	-0.0135*
*	[0.0076]	[0.0078]	[0.0079]	[0.0079]	[0.0079]	[0.0078]	[0.0077]
numEmp	0.0185	0.0163	0.0174	0.0159	0.0161	0.0157	0.0151
	[0.012]	[0.011]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
wageEmp	-0.00708	-0.00695	-0.00844	-0.00879	-0.00831	-0.00846	-0.00776
	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]
salesToEmp	0.0250^{**}	0.0246^{**}	0.0243^{**}	0.0236^{**}	0.0240^{**}	0.0266^{***}	0.0252^{**}
	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
inpInt	-0.00790	-0.00780	-0.00900	-0.00866	-0.00868	-0.0103	-0.0107
	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0092]	[0.0090]	[0.0090]
$D_{training}$	-0.0283	-0.0305	-0.0286	-0.0311	-0.0295	-0.0247	-0.0301
	[0.022]	[0.022]	[0.023]	[0.022]	[0.022]	[0.023]	[0.022]
UsePat	0.0688***						
	[0.021]						
TechTrans		0.0823***					
o		[0.025]					
QualWork			-0.0166				
4 11:			[0.030]	0.0500*			
AccFin				0.0529*			
				[0.027]	0.0251		
ForSuppNet					0.0351		
CIM and at A as					[0.023]	0.0201*	
GIMarketAcc						0.0381	
ass Par On						[0.021]	0 101***
uss1 u100							[0.037]
Obs	540	540	540	540	540	541	[0.037] 542
D2	0.00	0.00	0.00	0.01	0.01	0.01	0.01

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: *ifexToExp*: share of intra-firm exports in total exports. Main explanatory variable: *UsePat*: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in upgrading the quality of staff, *AccFin*: level of assistance provided by the parent in access to finance, *ForSuppNet*: level of assistance provided by the parent in access to global markets, *AssParOv*: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B8: Assistance from the parent company in several areas (intra-firm trade Vs production sharing with unaffiliated parties only) - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}
skillInt	-0.0273	-0.0256	-0.0192	-0.0208	-0.0204	-0.0185	-0.0246
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]
capInt	-0.00863	-0.00865	-0.00710	-0.00911	-0.00726	-0.00946	-0.00961
	[0.0090]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]	[0.0091]
numEmp	0.0479***	0.0488***	0.0527***	0.0511***	0.0495^{***}	0.0500***	0.0484***
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
wageEmp	0.0145	0.0171	0.0163	0.0162	0.0160	0.0143	0.0155
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
salesToEmp	0.0349***	0.0355***	0.0380***	0.0374^{***}	0.0367***	0.0382***	0.0358^{***}
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]
inpInt	0.00274	0.00198	0.000127	0.000357	0.000677	0.00112	0.00216
	[0.0094]	[0.0094]	[0.0095]	[0.0095]	[0.0094]	[0.0094]	[0.0093]
$D_{training}$ (d)	0.0230	0.0195	0.0274	0.0250	0.0231	0.0297	0.0224
	[0.027]	[0.027]	[0.027]	[0.027]	[0.027]	[0.027]	[0.027]
UsePat	0.146***						
	[0.027]						
TechTrans		0.124^{***}					
		[0.034]					
UpgQual		. ,	-0.0345				
			[0.031]				
AccFin				0.0634^{*}			
				[0.033]			
For SuppNet					0.0775^{**}		
					[0.034]		
GlMarketAcc						0.0964^{***}	
						[0.027]	
AssParOv						. ,	0.192^{***}
							[0.052]
Obs	1388	1393	1395	1394	1395	1390	1398
$Pseudo - R^2$	$0.18 \ 0.17$	0.16	0.16	0.17	0.17	0.17	
Log - likelihood	-688.8	-699.6	-706.3	-705.1	-703.5	-696.3	-700.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columes. Foreign affiliates with no trade and no local backward linkages (i.e., no production sharing) are excluded from the sample. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table B9: Assistance from the parent company in several areas (arm's length trade only Vs no trade but with local backward linkages) - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	D_{ift}	\mathbf{D}_{ift}
skillInt	0.00142	0.00226	0.00338	0.00288	0.00435	0.00233	0.00225
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]
capInt	0.0339^{***}	0.0337^{***}	0.0336^{***}	0.0343^{***}	0.0321^{***}	0.0333^{***}	0.0334^{***}
	[0.0087]	[0.0086]	[0.0086]	[0.0086]	[0.0083]	[0.0086]	[0.0086]
numEmp	0.0429^{***}	0.0423^{***}	0.0420^{***}	0.0427^{***}	0.0425^{***}	0.0424^{***}	0.0424^{***}
	[0.013]	[0.013]	[0.013]	[0.013]	[0.012]	[0.013]	[0.013]
wageEmp	-0.0152	-0.0149	-0.0151	-0.0148	-0.0184	-0.0158	-0.0150
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
salesToEmp	0.00211	0.00238	0.00312	0.00210	0.00201	0.00254	0.00221
	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]
inpInt	0.0114	0.0108	0.00967	0.0114	0.0120	0.0112	0.0109
	[0.011]	[0.010]	[0.010]	[0.011]	[0.010]	[0.010]	[0.010]
$D_{training}$ (d)	0.0306	0.0293	0.0280	0.0306	0.0230	0.0294	0.0290
	[0.025]	[0.025]	[0.025]	[0.025]	[0.024]	[0.025]	[0.024]
UsePat	-0.00388						
	[0.021]						
TechTrans		-0.00834					
		[0.029]					
UpgQual			-0.0402				
			[0.032]				
AccFin				-0.0323			
				[0.031]			
For SuppNet					0.0709^{**}		
					[0.030]		
GlMarketAcc						0.0149	
						[0.023]	
AssParOv							0.00164
							[0.039]
Obs	676	680	680	679	681	677	681
$Pseudo - R^2$	0.25	0.25	0.25	0.25	0.26	0.25	0.25
Log - likelihood	-231.0	-231.4	-230.7	-230.6	-227.7	-231.2	-231.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with intra-firm trade and hose with no trade and no local backward linkages are excluded from the sample. Dependent variable: D_{alt} : dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in agreading the quality of staff, AccFin: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies. Table B10: Assistance from the parent company in several areas (production sharing with unaffiliated parties only Vs no production sharing) - full-length table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	D_{ift}	D_{ift}	D_{ift}	\mathbf{D}_{ift}	D_{ift}	D_{ift}	D_{ift}
skillInt	-0.0141	-0.0125	-0.0146	-0.0144	-0.0161	-0.0143	-0.0153
	[0.010]	[0.0092]	[0.0097]	[0.011]	[0.0098]	[0.0093]	[0.011]
capInt	-0.00197	-0.00146	-0.00111	-0.000892	0.0000356	-0.000922	-0.000820
	[0.0054]	[0.0056]	[0.0057]	[0.0058]	[0.0058]	[0.0056]	[0.0058]
numEmp	-0.0205**	-0.0210***	-0.0214***	-0.0223**	-0.0192***	-0.0210***	-0.0209**
	[0.0084]	[0.0057]	[0.0065]	[0.0098]	[0.0067]	[0.0056]	[0.0093]
wageEmp	-0.00190	-0.00528	-0.00602	-0.00517	-0.00427	-0.00541	-0.00461
	[0.0085]	[0.0085]	[0.0089]	[0.0091]	[0.0088]	[0.0087]	[0.0091]
salesToEmp	-0.00495	-0.00478	-0.00548	-0.00610	-0.00530	-0.00539	-0.00555
	[0.0061]	[0.0058]	[0.0061]	[0.0065]	[0.0062]	[0.0059]	[0.0065]
inpInt	-0.0175***	-0.0166***	-0.0176***	-0.0178**	-0.0180***	-0.0167***	-0.0181***
	[0.0061]	[0.0036]	[0.0041]	[0.0072]	[0.0041]	[0.0033]	[0.0070]
$D_{training}$ (d)	0.0150	0.0107	0.0123	0.00794	0.0133	0.0135	0.0141
	[0.018]	[0.018]	[0.018]	[0.019]	[0.018]	[0.018]	[0.019]
UsePat	-0.0297**						
	[0.014]						
TechTrans	. ,	0.0128					
		[0.017]					
UpgQual		. ,	-0.0166				
			[0.019]				
AccFin				-0.0353*			
				[0.019]			
For SuppNet					-0.0454^{***}		
					[0.013]		
GlMarketAcc					. ,	-0.00782	
						[0.014]	
AssParOv							-0.0497^{*}
							[0.027]
Obs	746	752	754	753	753	746	755
$Pseudo - R^2$	0.41	0.40	0.39	0.40	0.40	0.39	0.40
Log - likelihood	-254.0	-261.6	-264.9	-261.1	-261.0	-262.4	-263.6

Notes: Proble estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with intra-firm trade are excluded from the sample. Dependent variable: $D_{noT-radeNoLBLink}$: dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	D_{ift}							
skillInt	-0.0132	-0.0145	-0.0155	-0.0154	-0.0154	-0.0152	-0.0152	-0.0177
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
capInt	-0.00718	-0.00471	-0.00536	-0.00590	-0.00551	-0.00577	-0.00627	-0.00748
	[0.0076]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]	[0.0077]
numEmp	0.0494***	0.0501***	0.0482***	0.0471***	0.0484***	0.0476***	0.0474***	0.0463***
	[0.010]	[0.011]	[0.010]	[0.011]	[0.010]	[0.010]	[0.010]	[0.010]
wageEmp	0.0171	0.0173	0.0171	0.0169	0.0170	0.0170	0.0170	0.0135
5 1	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]
labProd	0.0355***	0.0329***	0.0326***	0.0330***	0.0329***	0.0331***	0.0333***	0.0369***
	[0.0098]	[0.0099]	[0.0100]	[0.0100]	[0.0099]	[0,0099]	[0.0099]	[0.010]
innInt	0.00235	0.00473	0.00454	0.00452	0.00478	0.00459	0.00463	0.00314
enep 1 nee	[0, 0081]	[0 0080]	[0 0080]	[0 0080]	[0 0080]	[0 0080]	[0 0080]	[0.0081]
Durining (d)	0.0199	0.0232	0.0218	0.0225	0.0239	0.0222	0.0206	0.0227
D training (α)	[0, 023]	[0.023]	[0.023]	[0, 023]	[0.023]	[0, 023]	[0.023]	[0, 022]
$D_{\mathrm{max}} = 1$	-0 154***	[0:020]	[0:020]	[0:020]	[0:020]	[0:020]	[0:020]	[0:022]
$D W CIntFund(\omega)$	[0.035]							
Deven a vi (d)	[0.000]	-0.0397*						
$D_W CBor BankIns$ (α)		[0.023]						
D		[0.025]	0.0275					
$D_{WCBorBankOuts}$ ($^{(u)}$			-0.0275					
D (d)			[0.030]	0.0180				
$D_{WCBorFam}$ (u)				-0.0180				
				[0.045]	0.0700			
$D_{WCBotNonBank}$ (d)					-0.0709			
D (1)					[0.053]	0.00711		
$D_{WCPurchCredit}$ (d)						-0.00711		
D (1)						[0.027]	0.0000	
$D_{WCIssNewEq}$ (d)							0.0939	
							[0.093]	o i s ovkalak
$D_{WCParent}$ (d)								0.478***
<u></u>								[0.045]
Obs	1581	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.27
Log - likelihood	-718.4	-728.6	-729.8	-729.9	-729.2	-730.0	-729.5	-668.3

Table B11: Source of finance of working capital (extensive margin) - full-length table

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : firm has intra-firm imports or exports, or both (dummy). Main explanatory variable is a dummy for a source of finance of working capital: $D_{WCIntFund}$: internal funds/retained earnings, $D_{WCBorBankIns}$: borrow from banks in the host country, $D_{WCBorBankIns}$: borrow from banks outside the host country, $D_{WCBorBankIns}$: borrow from non-bank financial institutions (e.g. equity funds), $D_{WCPurchCredit}$: through purchases on credit from suppliers and advances from customers, $D_{WCIsNNexEq}$; through new equity shares or new debt (including commercial paper and debentures), $D_{WCParent}$: through the parent company. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	D_{ift}							
skillInt	-0.0142	-0.0139	-0.0152	-0.0172	-0.0150	-0.0145	-0.0156	-0.0122
	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]	[0.014]
capInt	-0.00414	-0.00173	-0.00264	-0.00355	-0.00235	-0.00259	-0.00283	-0.00607
	[0.0076]	[0.0077]	[0.0077]	[0.0077]	[0.0076]	[0.0077]	[0.0077]	[0.0075]
numEmp	0.0453^{***}	0.0482^{***}	0.0469^{***}	0.0449^{***}	0.0467^{***}	0.0463^{***}	0.0462^{***}	0.0480^{***}
	[0.010]	[0.010]	[0.010]	[0.011]	[0.010]	[0.010]	[0.010]	[0.010]
wageEmp	0.0170	0.0173	0.0177	0.0177	0.0176	0.0179	0.0177	0.0126
	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]
labProd	0.0354***	0.0333***	0.0330***	0.0327***	0.0328***	0.0329***	0.0332***	0.0367***
	[0.0099]	[0.0099]	[0.0100]	[0.0100]	[0.0100]	[0.0099]	[0.0100]	[0.010]
inpInt	0.00105	0.00284	0.00305	0.00365	0.00318	0.00222	0.00332	0.00705
-	[0.0082]	[0.0081]	[0.0081]	[0.0081]	[0.0081]	[0.0081]	[0.0081]	[0.0085]
$D_{training}$ (d)	0.0207	0.0249	0.0249	0.0270	0.0281	0.0247	0.0258	0.0342
	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.023]	[0.022]
WCIntFund	-0.190***			. ,			. ,	
	[0.042]							
WCB or Bank Ins	. ,	-0.117**						
		[0.057]						
WCB or BankOuts			-0.104					
			[0.11]					
WCBorFam				-0.101				
				[0.14]				
WCBotNonBank				L]	-0.302			
					[0.23]			
WCPurchCredit						0.0769		
						[0.077]		
WCIssNewEq						[]	0.363	
1							[0.23]	
WCParent							[]	0.776^{***}
								[0.070]
Obs	1562	1560	1558	1559	1558	1559	1558	1559
$Pseudo - R^2$	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.27
Log - likelihood	-711.4	-718.2	-718.4	-719.6	-717.3	-718.7	-717.4	-655.5

Table B12: Source of finance of working capital (intensive margin) - full-length table

Notes: Proble estimations with host-country, parent-location and industry dummies in all columns. Dependent variables: D_{ift} : firm has intra-firm imports or exports, or both (dummy). Main explanatory variable is the share of a source of finance of working capital in the total: WCIntFund: internal funds/retained earnings, WCBorBankIns: borrow from banks in the host country, WCBorBankOuts: borrow from banks outside the host country, WCBorFam: borrow from family/friends/individual lenders, WCBotNonBank: borrow from non-bank financial institutions (e.g. equity funds), WCPurchCredit: through purchases on credit from suppliers and advances from customers, WCIssNewEq: through new equity shares or new debt (including commercial paper and debentures), WCParent: through the parent company. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

C Appendix: Robustness checks

Table C1: Assistance from the parent company in the use of patents, trademarks and brand names (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{UsePat1}$	$D_{UsePat2}$	$D_{UsePat3}$	$D_{UsePat4}$	$D_{UsePat5}$	$D_{UsePat6}$
	-0.144^{***}	-0.0566	0.0155	-0.00225	0.0106	0.111^{***}
	[0.024]	[0.037]	[0.047]	[0.027]	[0.025]	[0.030]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.22	0.21	0.21	0.20	0.21	0.21
Log-likelihood	-719.1	-729.0	-730.0	-730.0	-729.9	-722.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent in use of patents, trademarks, brand names. $D_{UsePat1}$: assistance neceived $D_{UsePat2}$: assistance received not important, $D_{UsePat2}$: assistance received very important, $D_{UsePat2}$: assistance received important, $D_{UsePat2}$: assistance received very important, $D_{UsePat6}$: assistance received crucial. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C2: Assistance from the parent company through technology and know-how transfer (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{TechTrans1}$	$D_{TechTrans2}$	$D_{TechTrans3}$	$D_{TechTrans4}$	$D_{TechTrans5}$	$D_{TechTrans6}$
	-0.116^{***}	-0.0148	-0.0344	-0.0154	0.0144	0.0615^{**}
	[0.034]	[0.055]	[0.045]	[0.024]	[0.023]	[0.028]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21
Log - likelihood	-726.4	-730.0	-729.8	-729.8	-729.8	-727.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent through technology and know-how transfer. $D_{rechTrans1}$: assistance not received, $D_{TechTrans2}$: assistance received not important, $D_{TechTrans3}$: assistance received slightly important, $D_{TechTrans4}$: assistance received inportant, $D_{TechTrans5}$: assistance received very important, $D_{TechTrans6}$: assistance received crucial. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C3: Assistance from the parent company in the upgrade of quality of workers (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{QualWork1}$	$D_{QualWork2}$	$D_{QualWork3}$	$D_{QualWork4}$	$D_{QualWork5}$	$D_{QualWork6}$
	0.0272	0.0398	0.0267	0.00685	-0.0345	0.0102
	[0.054]	[0.047]	[0.035]	[0.023]	[0.023]	[0.033]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21
Log-likelihood	-729.9	-729.7	-729.7	-730.0	-729.0	-730.0

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent in the upgrade of quality of workers. $D_{QualWork1}$: assistance not received, $D_{QualWork2}$: assistance received to important, $D_{QualWork2}$: assistance received slightly important, $D_{QualWork3}$: assistance received mportant, $D_{QualWork3}$: assistance received slightly important, $D_{QualWork3}$: assistance received sightly important, $D_{QualWork3}$: assistance received assistance received in the upportant assistance received a

Table C4: Assistance from the parent company in access to finance (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{AccFin1}$	$D_{AccFin2}$	$D_{AccFin3}$	$D_{AccFin4}$	$D_{AccFin5}$	$D_{AccFin6}$
	-0.0942**	0.00202	0.0137	0.00792	-0.0105	0.0367
	[0.038]	[0.061]	[0.047]	[0.027]	[0.023]	[0.026]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.20	0.21	0.21	0.21	0.21
Log - likelihood	-728.0	-730.0	-730.0	-730.0	-729.9	-729.0

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent in access to finance. $D_{AccFin1}$: assistance received, $D_{AccFin2}$: assistance received in the parent in access to finance. $D_{AccFin3}$: assistance received inportant, $D_{AccFin3}$: assistance received in the parent in the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C5: Assistance from the parent company in access to foreign supplier network (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{ForSuppNet1}$	$D_{ForSuppNet2}$	$D_{ForSuppNet3}$	$D_{ForSuppNet4}$	$D_{ForSuppNet5}$	$D_{ForSuppNet6}$
	-0.0643	-0.0140	0.000293	-0.0549**	0.00786	0.0842^{***}
	[0.046]	[0.052]	[0.043]	[0.023]	[0.024]	[0.029]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.20	0.21	0.21	0.21
Log - likelihood	-729.1	-730.0	-730.0	-727.5	-730.0	-725.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifft} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent in access to foreign supplier network. $D_{ForSuppNet1}$: assistance not received, $D_{ForSupPNet2}$: assistance received and important, $D_{ForSupPNet3}$: assistance received slightly important, $D_{ForSupPNet3}$: assistance received slightly important, $D_{ForSupPNet3}$: assistance received important, $D_{ForSupPNet5}$: assistance received important, $D_{ForSupNet5}$: assistance received important

Table C6: Assistance from the parent company in access to global markets (dummies for importance of assistance in separate regressions)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: D_{ift}	$D_{GlMarketAcc1}$	$D_{GlMarketAcc2}$	$D_{GlMarketAcc3}$	$D_{GlMarketAcc4}$	$D_{GlMarketAcc5}$	$D_{GlMarketAcc6}$
	-0.0934^{***}	-0.0765**	0.0130	0.00528	-0.000419	0.0774^{***}
	[0.030]	[0.036]	[0.041]	[0.027]	[0.025]	[0.027]
Obs	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.20	0.21
Log-likelihood	-726.2	-728.3	-730.0	-730.0	-730.0	-725.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: dummy for importance of assistance provided by the parent in access to global markets. $D_{GIMarketAcc1}$: assistance received of $D_{GIMarketAcc2}$: assistance received of $D_{GIMarketAcc2}$: assistance received and $D_{GIMarketAcc2}$: assistance received of the parent in $D_{GIMarketAcc2}$: assistance received signature to the satistance received assistance received signature to the satistance received assistance re

Table C7: Assistance from the parent company in the use of patents, trademarks and brand names (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{UsePat1}$ (d)	-0.170***	
	[0.022]	
$D_{UsePat2}$ (d)	-0.106***	0.108
	[0.031]	[0.067]
$D_{UsePat3}$ (d)	-0.0519	0.205***
	[0.040]	[0.077]
$D_{UsePat4}$ (d)	-0.0670**	0.172***
	[0.028]	[0.052]
$D_{UsePat5}$ (d)	-0.0556**	0.186***
	[0.027]	[0.049]
$D_{UsePat6}$ (d)		0.281***
		[0.055]
Obs	1581	1581
$Pseudo - R^2$	0.22	0.22
Log - likelihood	-714.1	-712.7

 $\label{eq:likelihood} -714.1 -712.7$ Notes: Probit estimations with host-country, parentlocation and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variables: dummy for importance of assistance provided by the parent in use of patents, trademarks, brand names. $D_{usePat1}$: assistance not received, $D_{usePat2}$: assistance received slightly important, $D_{UsePat3}$: assistance received slightly important, $D_{UsePat3}$: assistance received important, $D_{UsePat1}$: assistance received error important, $D_{UsePat6}$: assistance received error important, $D_{UsePat6}$: assistance received error important, $D_{UsePat6}$: assistance received error in the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies. Table C8: Assistance from the parent company through technology and know-how transfer (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{TechTrans1}$ (d)	-0.134^{***}	
	[0.031]	
$D_{TechTrans2}$ (d)	-0.0525	0.144
	[0.051]	[0.096]
$D_{TechTrans3}$ (d)	-0.0638	0.127
	[0.042]	[0.087]
$D_{TechTrans4}$ (d)	-0.0475*	0.143**
	[0.028]	[0.061]
$D_{TechTrans5}$ (d)	-0.0243	0.168***
	[0.027]	[0.059]
$D_{TechTrans6}$ (d)		0.221***
		[0.067]
Obs	1581	1581
$Pseudo - R^2$	0.21	0.21
Loa – likelihood	-724.6	-722.7

Table C9: Assistance from the parent company in the upgrade of quality of workers (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{QualWork1}$ (d)	0.0338	
	[0.062]	
$D_{QualWork2}$ (d)	0.0438	0.0394
-	[0.056]	[0.065]
$D_{QualWork3}$ (d)	0.0289	0.0255
-	[0.045]	[0.056]
$D_{QualWork4}$ (d)	0.00957	0.00657
	[0.035]	[0.048]
$D_{QualWork5}$ (d)	-0.0195	-0.0222
	[0.034]	[0.047]
$D_{QualWork6}$ (d)		0.0103
		[0.055]
Obs	1581	1581
$Pseudo - R^2$	0.21	0.21
Log – likelihood	-728.5	-728.6

Table C10: Assistance from the parent company in access to finance (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{AccFin1}$ (d)	-0.102***	
	[0.038]	
$D_{AccFin2}$ (d)	-0.0159	0.148
	[0.060]	[0.098]
$D_{AccFin3}$ (d)	-0.00597	0.160^{*}
	[0.048]	[0.085]
$D_{AccFin4}$ (d)	-0.0119	0.145^{**}
	[0.030]	[0.063]
$D_{AccFin5}$ (d)	-0.0227	0.127^{**}
	[0.026]	[0.057]
$D_{AccFin6}$ (d)		0.169^{***}
		[0.063]
Obs	1581	1581
$Pseudo - R^2$	0.21	0.21
Log - likelihood	-727.6	-725.7

 $\begin{array}{rcl} Log-likelihood & -724.6 & -725.7 \\ \hline \\ \hline Notes: Probit estimations with host-country, parent$ location and industry dummies in all columns. Dependent $variable: <math>D_{if1}$: dummy for intra-firm trade. Main explanatory variables: dummy for importance of assistance provided by the parent in access to finance. $D_{AccFin1}$: assistance not received, $D_{AccFin2}$: assistance received slightly important, $D_{AccFin3}$: assistance received slightly important, $D_{AccFin4}$: assistance received slightly important, $D_{AccFin6}$: control for main firm characteristics. Column 1 excludes $D_{AccFin6}$, while column 2 excludes $D_{AccFin1}$. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies. Table C11: Assistance from the parent company in access to foreign supplier network (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{ForSuppNet1}$ (d)	-0.101**	
	[0.039]	
$D_{ForSuppNet2}$ (d)	-0.0606	0.0730
	[0.046]	[0.084]
$D_{ForSuppNet3}$ (d)	-0.0459	0.0943
	[0.040]	[0.077]
$D_{ForSuppNet4}$ (d)	-0.0874^{***}	0.0406
	[0.026]	[0.056]
$D_{ForSuppNet5}$ (d)	-0.0442	0.0935^{*}
	[0.027]	[0.057]
$D_{ForSuppNet6}$ (d)		0.160^{**}
		[0.064]
Obs	1581	1581
$Pseudo - R^2$	0.21	0.21
Log – likelihood	-724.4	-722.7

Table C12: Assistance from the parent company in access to global markets (dummies for importance of assistance in a single regression)

	(1)	(2)
	D_{ift}	D_{ift}
$D_{GlMarketacc1}$ (d)	-0.116***	
	[0.029]	
$D_{GlMarketacc2}$ (d)	-0.104^{***}	0.0178
	[0.033]	[0.059]
$D_{GlMarketacc3}$ (d)	-0.0324	0.125^{*}
	[0.039]	[0.064]
$D_{GlMarketacc4}$ (d)	-0.0382	0.114^{**}
	[0.029]	[0.049]
$D_{GlMarketacc5}$ (d)	-0.0403	0.111^{**}
	[0.027]	[0.047]
$D_{GlMarketacc6}$ (d)		0.172^{***}
		[0.050]
Obs	1581	1581
$Pseudo - R^2$	0.21	0.22
Log-likelihood	-722.7	-720.8

Notes: Probit estimations with host-country, parentlocation and industry dummies in all columns. Dependent variable: D_{iff} : dummy for intra-firm trade. Main explanatory variables: dummy for importance of assistance provided by the parent in access to global markets. $D_{GIMarketAcc1}$: assistance roceived, $D_{GIMarketAcc2}$: assistance received not important, $D_{GIMarketAcc2}$: assistance received slightly important, $D_{GIMarketAcc2}$: assistance received important, $D_{GIMarketAcc2}$: assistance received very important, $D_{GIMarketAcc2}$: assistance main 1 excludes $D_{GIMarketAcc2}$, while column 2 excludes $D_{GIMarketAcc1}$. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C13: Assistance from the parent company in several areas (sample with nonmissing observations for either intra-firm imports or exports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.166^{***}	0.129^{***}	-0.0522	0.0554	0.0764^{**}	0.107^{***}	0.200^{***}
	[0.029]	[0.037]	[0.034]	[0.036]	[0.038]	[0.029]	[0.057]
Obs	1276	1278	1280	1280	1280	1275	1283
$Pseudo - R^2$	0.17	0.16	0.15	0.15	0.15	0.16	0.16
Log - likelihood	-663.5	-675.6	-681.1	-681.3	-679.4	-671.4	-676.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C14: Assistance from the parent company in several areas (sample with nonmissing observations for both intra-firm imports and exports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.187^{***}	0.163^{**}	-0.0764	-0.00284	0.00404	0.0415	0.112
	[0.055]	[0.068]	[0.067]	[0.069]	[0.066]	[0.058]	[0.10]
Obs	486	486	486	487	486	486	487
$Pseudo - R^2$	0.18	0.17	0.17	0.16	0.16	0.17	0.17
Log - likelihood	-274.5	-277.2	-279.2	-280.3	-279.8	-279.0	-279.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in loge except for dummies.

Table C15: Assistance from the parent company in several areas (sample with nonmissing observations for either intra-firm imports or exports - manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.173^{***}	0.165^{***}	-0.0630	0.0404	0.0490	0.0980^{***}	0.186^{***}
	[0.039]	[0.051]	[0.043]	[0.047]	[0.047]	[0.035]	[0.070]
Obs	846	847	847	847	847	848	848
$Pseudo - R^2$	0.17	0.16	0.15	0.15	0.15	0.16	0.16
Log - likelihood	-435.6	-441.2	-445.2	-446.1	-445.6	-442.9	-443.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in upgrading the quality of staff, AceFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GIMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C16: Assistance from the parent company in several areas (sample with nonmissing observations for both intra-firm imports and exports - manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.183^{***}	0.159^{*}	-0.105	-0.0264	-0.0165	0.0249	0.0656
	[0.064]	[0.081]	[0.076]	[0.078]	[0.073]	[0.060]	[0.11]
Obs	396	396	396	397	396	397	397
$Pseudo - R^2$	0.19	0.18	0.18	0.18	0.18	0.18	0.18
Log-likelihood	-220.1	-222.1	-223.0	-224.3	-223.8	-224.3	-224.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AcFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C17: Assistance from the parent company in several areas (dep. var: dummy for intra-firm imports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifim}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0930^{***}	0.0794^{***}	-0.0396*	0.0426^{*}	0.0543^{**}	0.0404^{**}	0.120^{***}
	[0.019]	[0.026]	[0.022]	[0.024]	[0.026]	[0.019]	[0.037]
Obs	1517	1526	1529	1528	1528	1521	1532
$Pseudo - R^2$	0.19	0.18	0.18	0.18	0.18	0.18	0.18
Log - likelihood	-619.9	-628.9	-633.1	-633.0	-631.5	-629.9	-630.9

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifin} : dummy for intra-firm imports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C18: Assistance from the parent company in several areas (dep. var: dummy for intra-firm exports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifex}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0574^{***}	0.0604^{***}	0.00203	0.0231	0.0245	0.0577^{***}	0.0820^{***}
	[0.016]	[0.019]	[0.017]	[0.018]	[0.017]	[0.017]	[0.031]
Obs	1222	1226	1227	1228	1228	1222	1230
$Pseudo - R^2$	0.29	0.29	0.28	0.28	0.28	0.29	0.29
Log - likelihood	-369.3	-372.1	-377.1	-377.4	-376.1	-368.8	-373.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifex} : dummy for intra-firm exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifimex}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0395^{***}	0.0577^{***}	-0.00569	0.0181	0.0265^{*}	0.0203	0.0681^{***}
	[0.015]	[0.019]	[0.011]	[0.013]	[0.016]	[0.013]	[0.025]
Obs	855	858	858	859	858	864	869
$Pseudo - R^2$	0.30	0.31	0.28	0.28	0.29	0.29	0.30

-186.1

Table C19: Assistance from the parent company in several areas (dep. var: dummy for intra-firm imports and exports)

Notes: Probit estimations with host-country, parent-location and industry dumnies in all columns. Dependent variable: D_{ifimex} : dummy for intra-firm imports and exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

-185.8

-184.6

-186.7

-184.2

Log - likelihood

-180.3

-179.7

Table C20: Assistance from the parent company in several areas (dep. var: dummy for at least 25% of the value of production inputs accounted for by intra-firm imports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifim25}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.0758^{***}	0.0699^{***}	-0.0186	0.0469^{**}	0.0540^{**}	0.0398^{**}	0.117^{***}
	[0.017]	[0.024]	[0.020]	[0.022]	[0.024]	[0.017]	[0.035]
Obs	1507	1516	1519	1518	1518	1511	1522
$Pseudo - R^2$	0.18	0.18	0.17	0.17	0.17	0.17	0.18
Log - likelihood	-556.6	-562.7	-567.4	-565.5	-564.5	-562.0	-562.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifim25} : dummy for at least 25% of the value of production inputs accounted for by intra-firm imports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C21: Assistance from the parent company in several areas (dep. var: dummy for at least 50% of the value of production inputs accounted for by intra-firm imports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifim50}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0627^{***}	0.0672^{***}	-0.0205	0.0430^{**}	0.0507^{**}	0.0303^{**}	0.101^{***}
	[0.015]	[0.021]	[0.017]	[0.019]	[0.020]	[0.015]	[0.033]
Obs	1480	1489	1492	1491	1491	1484	1495
$Pseudo - R^2$	0.20	0.19	0.18	0.19	0.19	0.19	0.19
Log - likelihood	-474.0	-478.4	-483.7	-481.9	-480.7	-479.2	-479.1

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifin50} : dummy for at least 50% of the value of production inputs accounted for by intra-firm imports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in the technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C22:	Assistar	nce from	the parent	company	in several	areas	(dep. v	ar: dumn	ny for
at least 75%	% of the	value of	production	inputs a	ccounted f	for by i	intra-fir	m import	\mathbf{s})

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifim75}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0446^{***}	0.0486^{***}	-0.0134	0.0354^{**}	0.0383^{**}	0.0245^{*}	0.0782^{***}
	[0.013]	[0.018]	[0.014]	[0.017]	[0.018]	[0.013]	[0.029]
Obs	1462	1471	1474	1473	1473	1466	1477
$Pseudo - R^2$	0.18	0.18	0.17	0.17	0.18	0.17	0.18
Log-likelihood	-417.2	-419.1	-423.2	-421.4	-420.5	-419.6	-419.4

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifim75} : dummy for at least 75% of the value of production inputs accounted for by intra-firm imports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C23: Assistance from the parent company in several areas (dep. var: dummy for at least 25% of the value of direct exports accounted for by intra-firm exports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifex25}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0406^{**}	0.0358^{**}	-0.0105	0.0186	0.0294^{*}	0.0390^{***}	0.0547^{*}
	[0.017]	[0.015]	[0.013]	[0.016]	[0.015]	[0.013]	[0.030]
Obs	1070	1074	1075	1076	1076	1071	1078
$Pseudo - R^2$	0.29	0.28	0.28	0.28	0.28	0.29	0.28
Log - likelihood	-267.9	-271.0	-273.5	-274.6	-271.9	-269.6	-273.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifex25} : dummy for at least 25% of the value of direct exports accounted for by intra-firm exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AceFin: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C24: Assistance from the parent company in several areas (dep. var: dummy for at least 50% of the value of direct exports accounted for by intra-firm exports)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifex50}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0343^{***}	0.0324^{***}	-0.0104	0.0207^{*}	0.0254^{**}	0.0273^{***}	0.0543^{***}
	[0.0100]	[0.012]	[0.0097]	[0.012]	[0.012]	[0.010]	[0.020]
Obs	887	889	890	891	891	887	893
$Pseudo - R^2$	0.36	0.35	0.34	0.34	0.35	0.35	0.34
Log - likelihood	-180.3	-183.6	-186.5	-187.2	-185.1	-184.9	-186.9

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifex50} : dummy for at least 50% of the value of direct exports accounted for by intra-firm exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in the chnology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, G(MarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C25:	Assistance	from the	parent co	ompany in	several	areas (c	lep. va	r: dum	my for
at least 75 ⁰	% of the va	lue of dire	ect export	s accounte	ed for by	y intra-f	irm ex	ports)	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifex75}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0410^{***}	0.0443^{**}	-0.0154	0.0247	0.0203	0.0232^{*}	0.0597^{**}
	[0.013]	[0.017]	[0.015]	[0.017]	[0.016]	[0.013]	[0.025]
Obs	603	604	604	605	604	605	606
$Pseudo - R^2$	0.37	0.36	0.35	0.35	0.35	0.35	0.35
Log-likelihood	-132.6	-134.2	-136.4	-137.7	-136.4	-136.5	-137.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ifex75} : dummy for at least 75% of the value of direct exports accounted for by intra-firm exports. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in the chnology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, G(MarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C26: Assistance from the parent company in several areas (control for years since set-up of the firm)

	(1)	(0)	(0)	(4)	(٣)	$\langle c \rangle$	(7)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.126^{***}	0.0989^{***}	-0.0361	0.0528^{*}	0.0672^{**}	0.0834^{***}	0.162^{***}
	[0.023]	[0.029]	[0.027]	[0.028]	[0.030]	[0.023]	[0.045]
firmAge	-0.000118	-0.00162	-0.00385	-0.00113	-0.00211	-0.000224	0.000715
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]
Obs	1537	1546	1549	1548	1548	1541	1552
$Pseudo - R^2$	0.22	0.21	0.20	0.20	0.20	0.21	0.21
Log-likelihood	-700.9	-713.3	-718.7	-718.1	-716.3	-708.6	-713.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics and firm age (firmAge). Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C27: Assistance from the parent company in several areas (add dummies for firm age)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.123^{***}	0.0906^{***}	-0.0393	0.0603^{**}	0.0727^{**}	0.0858^{***}	0.164^{***}
	[0.023]	[0.030]	[0.027]	[0.028]	[0.029]	[0.022]	[0.044]
Obs	1487	1495	1498	1497	1497	1490	1501
$Pseudo - R^2$	0.25	0.24	0.23	0.23	0.24	0.24	0.24
Log-likelihood	-652.6	-664.3	-668.5	-668.3	-666.0	-659.1	-663.9

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dummies for firm age also included in regressions in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AcFin: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C28: Assistance from the parent company in several areas (add dummies for mode of investment)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.125^{***}	0.0966^{***}	-0.0383	0.0456	0.0624^{**}	0.0813^{***}	0.155^{***}
	[0.023]	[0.029]	[0.027]	[0.028]	[0.030]	[0.023]	[0.045]
Obs	1532	1541	1544	1543	1543	1536	1547
$Pseudo - R^2$	0.22	0.21	0.21	0.21	0.21	0.22	0.22
Log - likelihood	-693.8	-706.1	-711.2	-711.1	-709.2	-701.6	-706.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dummies for mode of investment also included in regressions in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in user of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent in access to global more otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C29: Assistance from the parent company in several areas (manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.171^{***}	0.163^{***}	-0.0556	0.0399	0.0488	0.0969^{***}	0.187^{***}
	[0.038]	[0.051]	[0.042]	[0.046]	[0.047]	[0.034]	[0.068]
Obs	858	859	859	859	859	860	860
$Pseudo - R^2$	0.17	0.16	0.15	0.15	0.15	0.16	0.16
Log-likelihood	-440.5	-446.3	-450.5	-451.1	-450.6	-448.0	-448.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AcFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C30: Assistance from the parent company in several areas (resource-based manufacturing)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.158^{**}	0.247^{***}	-0.0512	-0.0439	0.0206	0.117^{**}	0.143
	[0.062]	[0.085]	[0.069]	[0.081]	[0.074]	[0.055]	[0.11]
Obs	377	378	378	375	378	378	378
$Pseudo - R^2$	0.19	0.19	0.18	0.17	0.17	0.18	0.18
Log - likelihood	-190.4	-189.5	-193.4	-192.3	-193.7	-191.4	-192.8

Notes: Proble estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in resource-based manufacturing (RBM). Dependent variable: D_{iff} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in the constraint of the parent in the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C31: Assistance from the parent company in several areas (low-tech manufacturing)

	(1)	(2)	(2)	(4)	(5)	(6)	(7)
	(1)	(2)	(5)	(4)	(5)	(0)	(1)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.158^{*}	0.181^{*}	-0.105	0.118	-0.0271	0.0165	0.144
	[0.083]	[0.11]	[0.089]	[0.084]	[0.089]	[0.074]	[0.13]
Obs	219	219	219	220	219	220	220
$Pseudo - R^2$	0.26	0.26	0.25	0.25	0.25	0.25	0.25
Log-likelihood	-104.3	-104.8	-105.3	-105.9	-105.8	-106.6	-106.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in low-tech manufacturing (LTM). Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in user of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.
Table C32: Assistance from the parent company in several areas (high- and medium-tech manufacturing)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.280^{***}	0.158	0.0613	0.0786	0.150	0.137	0.498^{**}
	[0.099]	[0.13]	[0.12]	[0.12]	[0.10]	[0.092]	[0.20]
Obs	149	149	149	149	149	149	149
$Pseudo - R^2$	0.27	0.24	0.23	0.23	0.24	0.24	0.26
Log - likelihood	-65.3	-68.2	-68.8	-68.8	-67.9	-67.7	-66.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in high- and medium-tech manufacturing (MHTM). Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in usegrafing the quality of staff. AccFin: level of assistance provided by the parent in access to finance, ForSupNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C33: Assistance from the parent company in several areas (majority-owned foreign affiliates)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.144^{***}	0.116^{***}	-0.0358	0.0739^{**}	0.0731^{**}	0.0763^{***}	0.191^{***}
	[0.025]	[0.032]	[0.029]	[0.031]	[0.032]	[0.025]	[0.049]
Obs	1353	1358	1361	1360	1360	1354	1363
$Pseudo - R^2$	0.24	0.23	0.22	0.23	0.23	0.23	0.23
Log - likelihood	-599.2	-612.0	-617.9	-616.0	-615.4	-610.5	-611.7

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to majority-owned foreign affiliates (MOFAs) (i.e., the percentage of ownership of the foreign investor is at least 50%). Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C34: Assistance from the parent company in several areas (majority-owned foreign affiliates - manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.199^{***}	0.203^{***}	-0.0856*	0.0433	0.0141	0.0799^{**}	0.191^{**}
	[0.044]	[0.061]	[0.048]	[0.051]	[0.050]	[0.037]	[0.076]
Obs	711	712	712	712	712	713	713
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.17	0.18	0.18
Log-likelihood	-354.6	-360.4	-363.8	-365.2	-365.2	-364.0	-363.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to majority-owned foreign affiliates (MOFAs) (i.e., the percentage of ownership of the foreign investor is at least 50%) in manufacturing. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in useful assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C35: Assistance from the parent company in several areas (dummies for parent located in HI, non-SSA LMI and SSA countries)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.219^{***}	0.164^{***}	-0.0502	0.0270	0.0764	0.132^{***}	0.207^{***}
	[0.037]	[0.046]	[0.045]	[0.046]	[0.048]	[0.037]	[0.068]
Obs	955	958	961	961	959	954	962
$Pseudo - R^2$	0.20	0.18	0.18	0.17	0.18	0.18	0.18
Log - likelihood	-496.0	-508.4	-514.4	-515.9	-512.7	-505.7	-511.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Parent location: high-income country, non-SSA low/middle-income country, SSA country. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AceFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C36: Assistance from the parent company in several areas (dummies for pairs of host countries and industries)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.135^{***}	0.101^{***}	-0.0370	0.0535^{*}	0.0727^{**}	0.0903^{***}	0.175^{***}
	[0.022]	[0.027]	[0.026]	[0.028]	[0.029]	[0.022]	[0.045]
Obs	1599	1608	1611	1610	1610	1603	1614
$Pseudo - R^2$	0.17	0.15	0.15	0.15	0.15	0.16	0.16
Log - likelihood	-769.3	-786.0	-792.2	-791.8	-789.4	-780.8	-785.6

Notes: Probit estimations with dummies for parent-location and for pairs of host countries and industries in all columns. Dependent variable: D_{iff} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C37:	Assistance from	the parent	company	in several	areas	(dummies	for	pairs	of
parent locat	tions and indust	ries)							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.182^{***}	0.179^{***}	-0.0639	0.0735	0.0754	0.111^{***}	0.201^{***}
	[0.037]	[0.055]	[0.047]	[0.047]	[0.048]	[0.037]	[0.075]
Obs	866	872	872	873	872	866	873
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.18	0.19	0.18
Log-likelihood	-447.3	-456.1	-460.6	-461.4	-460.2	-453.4	-458.9

Notes: Probit estimations with dummies for host countries and for pairs of parent locations and industries in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C38: Assistance from the parent company in several areas (dummies for pairs of host countries and parent locations)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.155^{***}	0.130^{***}	-0.0623*	0.0546	0.0453	0.0863^{***}	0.170^{***}
	[0.030]	[0.040]	[0.038]	[0.038]	[0.039]	[0.030]	[0.059]
Obs	1139	1144	1146	1147	1145	1138	1149
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.18	0.19	0.19
Log - likelihood	-558.6	-569.0	-573.1	-574.4	-573.5	-565.2	-571.3

Notes: Probit estimations with dummies for industries and for pairs of host countries and parent locations in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C39: Assistance from the parent company in several areas (control for geographical distance between the parent location and the host country)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.191^{***}	0.146^{***}	-0.0341	0.0475	0.101^{**}	0.120^{***}	0.216^{***}
	[0.033]	[0.042]	[0.040]	[0.041]	[0.042]	[0.033]	[0.062]
geoDist	-0.176^{**}	-0.193^{***}	-0.191^{***}	-0.196^{***}	-0.191^{***}	-0.182^{***}	-0.198^{***}
	[0.069]	[0.067]	[0.068]	[0.068]	[0.067]	[0.068]	[0.068]
Obs	1049	1056	1059	1059	1058	1048	1062
$Pseudo - R^2$	0.20	0.19	0.19	0.19	0.19	0.19	0.19
Log - likelihood	-530.9	-542.2	-548.1	-548.6	-544.9	-539.1	-543.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics and geographical distance between the parent location and the host country (geoDist). Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C40: Assistance from the parent company in several areas (control for contiguity between the parent location and the host country)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.194^{***}	0.147^{***}	-0.0387	0.0444	0.0994^{**}	0.121^{***}	0.216^{***}
	[0.033]	[0.042]	[0.041]	[0.041]	[0.042]	[0.033]	[0.062]
contiguity (d)	0.0795	0.0992	0.0537	0.0672	0.0760	0.0675	0.0938
	[0.13]	[0.13]	[0.13]	[0.13]	[0.13]	[0.13]	[0.13]
Obs	1049	1056	1059	1059	1058	1048	1062
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.18	0.19	0.19
Log - likelihood	-533.8	-545.5	-551.6	-552.3	-548.3	-542.2	-547.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QuadWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics and geographical distance between the parent location and the host country (contiguity). Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C41: Assistance from the parent company in several areas (control for common official language between the parent location and the host country)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.194^{***}	0.144^{***}	-0.0409	0.0426	0.0986^{**}	0.120^{***}	0.213^{***}
	[0.033]	[0.042]	[0.041]	[0.041]	[0.042]	[0.034]	[0.062]
comLangOff (d)	-0.0295	-0.0581	-0.0639	-0.0790	-0.0657	-0.0165	-0.0583
	[0.090]	[0.087]	[0.087]	[0.089]	[0.087]	[0.089]	[0.087]
Obs	1049	1056	1059	1059	1058	1048	1062
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.18	0.19	0.19
Log-likelihood	-534.0	-545.7	-551.5	-552.1	-548.3	-542.4	-547.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics and common official language between the parent location and the host country (comLangOff). Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C42: Assistance from the parent company in several areas (control for colonial ties between the parent location and the host country)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.194^{***}	0.147^{***}	-0.0405	0.0427	0.0987^{**}	0.121^{***}	0.214^{***}
	[0.033]	[0.042]	[0.041]	[0.041]	[0.042]	[0.034]	[0.062]
colony (d)	-0.0273	-0.0522	0.000256	-0.00830	-0.0243	-0.00717	-0.0241
	[0.12]	[0.11]	[0.12]	[0.12]	[0.11]	[0.12]	[0.11]
Obs	1049	1056	1059	1059	1058	1048	1062
$Pseudo - R^2$	0.20	0.19	0.18	0.18	0.18	0.19	0.19
Log - likelihood	-534.0	-545.7	-551.7	-552.5	-548.5	-542.4	-547.7

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in uggrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics and colonial ties between the parent location and the host country (colony). Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C43: Assistance from the parent company in several areas (add dummies for company type)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.0820^{***}	0.0799^{***}	0.00745	0.0440	0.0655^{**}	0.0688^{***}	0.136^{***}
	[0.023]	[0.029]	[0.026]	[0.028]	[0.028]	[0.022]	[0.042]
Obs	1543	1552	1555	1554	1554	1547	1558
$Pseudo - R^2$	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Log - likelihood	-617.4	-622.1	-626.2	-626.0	-623.3	-618.2	-622.4

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Add dummies for company type (wholly-owned, joint venture, individual foreign investor). Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C44: Assistance to individual foreign investor from other associate companies in the business group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
-	0.0513^{***}	0.0465^{***}	0.0473^{***}	0.0578^{***}	0.0400^{**}	0.0466^{***}	0.0583^{***}
	[0.016]	[0.016]	[0.016]	[0.016]	[0.016]	[0.016]	[0.018]
Obs	604	604	603	603	606	602	607
$Pseudo - R^2$	0.20	0.19	0.19	0.20	0.20	0.20	0.21
Log - likelihood	-213.2	-214.3	-214.3	-211.8	-215.3	-213.7	-213.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to individual foreign investors. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C45: Assistance from the parent company in several areas (logit model)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.817^{***}	0.645^{***}	-0.201	0.356^{**}	0.456^{**}	0.542^{***}	1.070^{***}
	[0.16]	[0.19]	[0.17]	[0.18]	[0.19]	[0.15]	[0.31]
Obs	1543	1552	1555	1554	1554	1547	1558
$Pseudo - R^2$	0.22	0.21	0.20	0.20	0.21	0.21	0.21
Log - likelihood	-701.9	-714.4	-720.5	-719.4	-717.5	-709.8	-714.4

Notes: Logit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to for assistance provided by the parent in access to forsus to finance, ForSuppNet: level of assistance provided by the parent in access to forsus to finance, SorSupPNet: level of assistance provided by the parent in access to forsus the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C46: Assistance from the parent company in several areas (linear probability model)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.0915^{***}	0.0713^{***}	-0.0311	0.0532^{**}	0.0520^{**}	0.0654^{***}	0.124^{***}
	[0.017]	[0.023]	[0.026]	[0.024]	[0.022]	[0.018]	[0.033]
Obs	1699	1708	1711	1710	1710	1703	1714
R^2	0.16	0.16	0.15	0.16	0.16	0.16	0.16

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C47: Assistance from the parent company in use of patents, trademarks, brand names (control for knowledge creation)

Dep. var: D_{ift}	(1) UsePat	$(2) \\ UsePat \\ 0.174***$	(3) UsePat	(4) UsePat	(5) UsePat	(6) UsePat	(7) UsePat 0.174***	(8) UsePat	(9) UsePat
RDToEmp	[0.034] -0.00432	[0.034]	[0.034]	[0.034]	[0.034]	[0.034]	[0.034]	[0.034]	[0.034]
RDToSales	[0.011]	-0.0103							
adantTechToEmn		[0.0063]	0.00640						
adaptTechToSales			[0.0091]	-0.000582					
tochUngToFmn				[0.0065]	0.00403				
techt pg1 0Lmp					[0.00435]	0.000014			
D (d)						[0.000514]	0.0051**		
$D_{R\&D}$ (u)							[0.0851]	0.00000	
$D_{adaptTech}$ (d)								[0.00936]	0.0100
$D_{techUpg}$ (d)									[0.0198]
Obs $Pseudo - R^2$	$1075 \\ 0.16$	$1075 \\ 0.17$	$1075 \\ 0.16$	$1075 \\ 0.16$	$1075 \\ 0.16$	$1075 \\ 0.16$	$1075 \\ 0.17$	$1075 \\ 0.16$	$1075 \\ 0.16$
Log – likelihood	-561.8	-560.6	-561.7	-561.9	-561.8	-561.9	-559.5	-561.9	-561.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable: D_{eff} : dummy for intra-firm trade. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names. Control for the average annual amount spent on R&D during the last three financial years to total employment (RDTOEmp) in column 1, the average annual amount spent on R&D during the last three financial years to total employment (adaptTechToEmp) in column 3, the average annual amount spent on adaptation of technology during the last three financial years to total employment (adaptTechToEmp) in column 3, the average annual amount spent on adaptation of technology during the last three financial years to total employment (acdaptTechToEmp) in column 3, the average annual amount spent on adaptation of technology during the last three financial years to total employment (techUpgToEmp) in column 5, the average annual amount spent on adaptation of technology during the last three financial years to total employment (techUpgToEmp) in column 6, a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on R&D during the last three financial years ($D_{R&D}$) in column 7, a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on either R&D or adaptation of technology during the last three financial years ($D_{acdaptTech}$) in column 8, and a dummy which is equal to 1 if the firm has non-zero and non-missing expenditures on either R&D or adaptation of technology during the last three financial years ($D_{acdaptTech}$) in column 8, and a dummy which is equal to 1. All variables are in logs except for dummies. Table C48: Assistance from the parent company in technology and know-how (control for knowledge creation)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dep. var: D_{ift}	TechTrans	TechTrans	TechTrans	TechTrans	TechTrans	TechTrans	TechTrans	TechTrans	TechTrans
	0.138^{***}	0.138^{***}	0.141^{***}	0.139^{***}	0.140^{***}	0.139^{***}	0.137***	0.139^{***}	0.139^{***}
	[0.042]	[0.042]	[0.042]	[0.042]	[0.042]	[0.042]	[0.042]	[0.042]	[0.042]
RDToEmp	-0.00237								
	[0.011]								
RDToSales		-0.00863							
		[0.0063]							
adaptTechToEmp			0.00891						
			[0.0093]	0.00105					
adaptTechToSales				0.00125					
to chilles a To Frances				[0.0064]	0.00610				
гесно рд1 о£тр					0.00019				
techUnaToSales					[0.0089]	0.0000190			
teene pg1 obuies						[0 0066]			
$D_{B^{n}-D}$ (d)						[0.0000]	0.0754^{*}		
D R a D (a)							[0.039]		
$D_{adaptTech}$ (d)							[0.000]	0.00333	
dauppi con ()								[0.035]	
$D_{techUpg}$ (d)									0.0165
15 ()									[0.034]
Obs	1077	1077	1077	1077	1077	1077	1077	1077	1077
$Pseudo - R^2$	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Log - likelihood	-572.3	-571.4	-571.8	-572.3	-572.1	-572.4	-570.4	-572.3	-572.2

Notes: Probit estimations with host-country, parent-location and industry dummis in all columns. Dependent variable: $D_{1f,1}$ D12.4 D12.4 D12.5 D12.

Table C49: Assistance from the parent company in several areas (dummies for values of importance of assistance greater than 3 - manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	$D_{UsePatHigh}$	$D_{TechTransHigh}$	$D_{QualWorkHigh}$	$D_{AccFinHigh}$	$D_{ForSuppNetHigh}$	$D_{GlMarketAccHigh}$	$D_{assParOvHigh}$
	0.127^{***}	0.0780	-0.0971**	0.00988	0.00742	0.0872^{**}	0.0633
	[0.038]	[0.048]	[0.043]	[0.049]	[0.048]	[0.038]	[0.053]
Obs	869	869	869	869	869	869	869
$Pseudo - R^2$	0.16	0.15	0.16	0.15	0.15	0.16	0.15
Log - likelihood	-450.9	-454.7	-453.4	-455.9	-455.9	-453.4	-455.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Dependent variable: D_{ift} : dummy for intra-firm trade. Main explanatory variable: $D_{UsePatHigh}$: level of assistance provided by the parent in use of patents, trademarks, brand names greater than 3, $D_{TechTransHigh}$: level of assistance provided by the parent in technology and know-how greater than 3, $D_{QualWorkHigh}$: level of assistance provided by the parent in access to finance greater than 3, $D_{Tecc}Tir_{High}$: level of assistance provided by the parent in access to foreign supplier network greater than 3, $D_{CalMarketAccHigh}$: level of assistance provided by the parent in access to global markets greater than 3, $D_{AssParOsHigh}$: level of overall assistance provided by the parent firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C50: Assistance from the parent company in several areas (dummies for values of importance of assistance no greater than 3 - manufacturing sector)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ift}	$D_{UsePatLow}$	$D_{TechTransLow}$	$D_{QualWorkLow}$	$D_{AccFinLow}$	$D_{ForSuppNetLow}$	$D_{GlMarketAccLow}$	$D_{assParOvLow}$
	-0.135^{***}	-0.0939*	0.0921^{**}	-0.00928	-0.0167	-0.0908**	-0.0716
	[0.038]	[0.048]	[0.044]	[0.051]	[0.049]	[0.038]	[0.054]
Obs	869	869	869	869	869	869	869
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.16	0.15
Log - likelihood	-450.3	-454.2	-453.7	-455.9	-455.8	-453.3	-455.0

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Dependent variable: D_{iffe} : dummy for intra-firm trade. Main explanatory variable: $D_{UsePatLow}$: level of assistance provided by the parent in use of patents, trademarks, brand names no greater than 3, $D_{TcehTransLow}$: level of assistance provided by the parent in use of patents, trademarks, brand names no greater than 3, $D_{TcehTransLow}$: level of assistance provided by the parent in access to finance no greater than 3, $D_{AccFinLow}$: level of assistance provided by the parent in access to finance no greater than 3, $D_{ForSupNetLow}$: level of assistance provided by the parent in access to foreign supplier network no greater than 3, $D_{CdMarketAccLow}$: level of assistance provided by the parent in access to global markets no greater than 3, $D_{AcsFinLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AcsFinLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AcsFinLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AcsFinLow}$: level of overall assistance provided by the parent in access to global markets no greater than 3, $D_{AcsFinLow}$: level of overall assistance provided by the parent in access to global markets no greater than 0 therwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C51: Impact of the assistance from the parent company in several areas on the extensive and intensive margin of intra-firm imports (manufacturing sector)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifim}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.120^{***}	0.116^{***}	-0.0594	0.0513	0.0528	0.0453^{*}	0.138^{***}
	[0.027]	[0.034]	[0.037]	[0.036]	[0.039]	[0.026]	[0.047]
Obs	909	910	911	911	911	912	912
R^2	0.091	0.082	0.075	0.074	0.074	0.075	0.080
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: <i>ifimToInp</i>	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0594^{***}	0.0548^{***}	-0.0235	0.0359^{**}	0.0390^{**}	0.0292^{**}	0.0814^{***}
	0.0603^{***}	0.0622^{***}	-0.0361*	0.0356^{*}	0.0371^{*}	0.0261^{*}	0.0786^{***}
	[0.015]	[0.019]	[0.021]	[0.020]	[0.021]	[0.015]	[0.026]
Obs	894	895	896	896	896	897	897
R^2	0.10	0.095	0.089	0.088	0.090	0.088	0.093

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: D_{ifim} : dummy for intra-firm imports. Panel B: Dependent variable: ifimToInp: share of intra-firm imports of production inputs in total value of production inputs. Panels A and B: Main explanatory variable: UsePact: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in user for equivalent of the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C52: Impact of the assistance from the parent company in several areas on the extensive and intensive margin of intra-firm exports (manufacturing sector)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{ifex}	UsePat	TechTrans	Qual Work	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0682^{***}	0.0777^{**}	-0.00431	0.0427	0.0224	0.0628^{***}	0.0998^{**}
	[0.023]	[0.031]	[0.033]	[0.031]	[0.030]	[0.021]	[0.047]
Obs	909	910	911	911	911	912	912
R^2	0.094	0.092	0.085	0.089	0.086	0.095	0.092
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: <i>ifexToExp</i>	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	assParOv
	0.0421^{**}	0.0723^{***}	-0.0386	0.0465	0.0234	0.0299	0.0700^{**}
	[0.021]	[0.024]	[0.031]	[0.029]	[0.022]	[0.018]	[0.034]
Obs	436	436	436	436	436	437	437
R^2	0.22	0.23	0.22	0.22	0.21	0.22	0.22

Notes: Linear probability estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: D_{ifex} : dummy for intra-firm exports. Panel B: Dependent variable: ifexToExp: share of intra-firm exports in total exports. Panels A and B: Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent in access to global markets. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in loge except for dummies.

Table C53: Assistance from the parent company in several areas (intra-firm trade Vs arm's length trade only)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{alt}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.162^{***}	0.149^{***}	-0.0237	0.0793^{**}	0.0708^{*}	0.0985^{***}	0.215^{***}
	[0.030]	[0.038]	[0.035]	[0.036]	[0.038]	[0.030]	[0.057]
Obs	1220	1223	1225	1225	1225	1220	1228
$Pseudo - R^2$	0.17	0.16	0.15	0.15	0.15	0.16	0.16
Log - likelihood	-640.9	-650.0	-658.3	-656.0	-656.1	-648.9	-651.7

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates without trade are excluded from the sample. Dependent variable: D_{att} : dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C54: Assistance from the parent company in several areas (intra-firm trade Vs no trade but with local backward linkages)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
$D_{noTradeNoLBLink}$	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.127^{***}	0.0166	-0.149^{**}	-0.0244	0.137^{**}	0.133^{**}	0.108
	[0.046]	[0.058]	[0.059]	[0.067]	[0.064]	[0.052]	[0.077]
Obs	382	383	383	384	383	382	385
$Pseudo - R^2$	0.33	0.32	0.33	0.32	0.34	0.34	0.32
Log - likelihood	-154.7	-157.9	-154.8	-158.2	-154.2	-153.7	-157.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with only arm's length trade and with no trade and no local backward linkages are excluded from the sample. Dependent variable: $D_{ncTradeNoLBLink}$: dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in ugrading the quality of staff, AccFine: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C55: Assistance from the parent company in several areas (intra-firm trade Vs arm's length trade only) - manufacturing sector

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{alt}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.187^{***}	0.187^{***}	-0.0409	0.0503	0.0512	0.108^{***}	0.215^{***}
	[0.043]	[0.056]	[0.047]	[0.051]	[0.053]	[0.037]	[0.075]
Obs	757	758	758	758	758	759	759
$Pseudo - R^2$	0.16	0.15	0.14	0.14	0.14	0.15	0.15
Log-likelihood	-405.6	-410.5	-415.6	-415.3	-415.3	-412.4	-412.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates without trade are excluded from the sample. Sample also restricted to firms in manufacturing. Dependent variable: D_{alt} : dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C56: Assistance from the parent company in several areas (intra-firm trade Vs no trade but with local backward linkages) - manufacturing sector

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var:							
$D_{noTradeNoLBLink}$	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	0.135	0.00270	-0.169^{*}	-0.0142	0.0692	0.102	0.0586
	[0.084]	[0.10]	[0.10]	[0.11]	[0.10]	[0.088]	[0.12]
Obs	239	239	239	240	239	240	240
$Pseudo - R^2$	0.37	0.36	0.37	0.36	0.36	0.36	0.36
Loq - likelihood	-97.2	-98.3	-96.9	-98.8	-98.0	-97.9	-98.7

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with only arm's length trade and with no trade and no local backward linkages are excluded from the sample. Sample also restricted to firms in manufacturing. Dependent variable: $D_{noTradeNoLBLink}$: dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, TechTrans: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C57: Assistance from the parent company in several areas (arm's length trade only Vs no trade but with local backward linkages) - manufacturing sector

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var: D_{alt}	UsePat	TechTrans	QualWork	AccFin	For SuppNet	GlMarketAcc	AssParOv
	-0.0385	-0.0451	-0.0660	-0.0489	0.0853^{*}	-0.00542	-0.0424
	[0.035]	[0.051]	[0.053]	[0.048]	[0.046]	[0.036]	[0.061]
Obs	407	408	408	408	408	408	408
$Pseudo - R^2$	0.27	0.27	0.27	0.27	0.28	0.27	0.27
Log - likelihood	-152.3	-152.5	-152.1	-152.3	-151.0	-152.8	-152.6

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Foreign affiliates with intra-firm trade and those with no trade and no local backward linkages are excluded from the sample. Sample restricted to firms in manufacturing. Dependent variable: D_{alt} : dummy for arm's length trade only. Main explanatory variable: UsePat: level of assistance provided by the parent in use of patents, trademarks, brand names, *TechTrans*: level of assistance provided by the parent in technology and know-how, QualWork: level of assistance provided by the parent in upgrading the quality of staff, AccFin: level of assistance provided by the parent in access to finance, ForSuppNet: level of assistance provided by the parent in access to foreign supplier network, GlMarketAcc: level of assistance provided by the parent in access to global markets, AssParOv: overall assistance provided by the parent. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variables form 0 to 1. All variables are in logs except for dummies.

Table C58: Source of finance of fixed assets (extensive and intensive margin)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.106***	-0.0338	-0.0214	0.0193	-0.118^{***}	0.0107	-0.0428	0.477^{***}
	[0.030]	[0.024]	[0.037]	[0.049]	[0.042]	[0.039]	[0.088]	[0.045]
Obs	1581	1581	1581	1581	1581	1581	1581	1581
$Pseudo - R^2$	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.27
Log-likelihood	-722.8	-729.1	-729.9	-729.9	-728.0	-730.0	-729.9	-667.3
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.181***	-0.0684	-0.138	0.00337	-0.557***	0.0641	-0.339	0.679^{***}
	[0.040]	[0.053]	[0.10]	[0.13]	[0.20]	[0.10]	[0.30]	[0.067]
Obs	1534	1534	1532	1533	1532	1533	1533	1534
$Pseudo - R^2$	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.26
Loa – likelihood	-701.4	-709.3	-709.1	-710.7	-706.1	-709.9	-709.4	-653.3

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dependent variable in both panels: D_{ifi} : firm has intra-firm imports or exports, or both (dummy). Main explanatory variable in Panel A is a dummy for source of finance of working capital: $D_{FAIntFund}$ (D_{FA1}): internal funds/retained earnings, $D_{FABorBankIns}$ (D_{FA2}): borrow from banks in the host country, $D_{FABorBankIns}$ (D_{FA2}): borrow from banks in the host country, $D_{FABorBankIns}$ (D_{FA2}): borrow from family/friends/individual lenders, $D_{FABorMank}$ (D_{FA3}): borrow from non-bank financial institutions (e.g. equity funds), $D_{FAPurchCredit}$ (D_{FA6}): through purchases on credit from suppliers and advances from customers, $D_{FAIsewwww} q$ (D_{FA7}): borrow from evel det (including commercial paper and debentures), $D_{FAPorent}$ (D_{FA8}): through the parent company. Main explanatory variable in Panel B is the share of a source of finance of working capital in the total: sources are the same as in Panel A. Control for main firm characteristics. Dummies take value 1 if the statement holds, and 0 otherwise. (d): discrete change of dummy variable from 0 to 1. All variables are in logs except for dummies.

Table C59: Source of finance of working capital (extensive and intensive margin) (sample with non-missing observations for either intra-firm imports or exports)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
-	-0.182***	-0.0599**	-0.0392	-0.0248	-0.110	-0.0175	0.0954	0.556^{***}
	[0.040]	[0.029]	[0.048]	[0.056]	[0.069]	[0.034]	[0.11]	[0.043]
Obs	1300	1300	1300	1300	1300	1300	1300	1300
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.23
Log-likelihood	-679.6	-688.4	-690.1	-690.3	-689.2	-690.3	-690.0	-624.1
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
	-0.225^{***}	-0.171^{**}	-0.132	-0.135	-0.541^{**}	0.0861	0.361	1.173^{***}
	[0.053]	[0.073]	[0.14]	[0.18]	[0.27]	[0.097]	[0.28]	[0.12]
Obs	1288	1287	1286	1286	1285	1286	1285	1286
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.24
Log - likelihood	-675.2	-679.7	-680.3	-681.3	-678.3	-681.0	-679.4	-612.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: $D_{WCIntFund}$ (D_{WC1}): internal funds/retained earnings (dummy), $D_{WCBorBank/lns}$ (D_{WC2}): borrow from banks in the host country (dummy), $D_{WCBorBank}(D_{WC2})$: borrow from from family/friends/individual lenders (dumy), $D_{WCBorBank}(D_{WC2})$: borrow from non-banks outside the host country (dummy), $D_{WCBorFanc}(D_{WC2})$: borrow from from family/friends/individual lenders (dumy), $D_{WCBorDark}(D_{WC2})$: borrow from non-banks outside the host country (dummy), $D_{WCParent}(D_{WC3})$: borrow from from suppliers and advances from customers (dummy), $D_{WCBirsNewE4}$ (D_{WC3}): through the parent company (dummy). Panel B: Dependent variable: WCIntFund (WC1): share of finance from internal funds/retained earnings, WCBorBank/lns (WC2): share of finance from borrowed funds from banks in the host country, WCBorBank/lns (WC3): share of finance from borrowed funds from banks outside the host country, WC4: share of finance from borrowed funds from family/friends/individual lenders, WCB0: share of finance from borrowed funds from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from suppliers and advances from customers, WCIssNewE4 (WC5): share of finance from funds raised through purchases on reed the fincluding commercial paper and debentures), WCParent (WC8): share of finance from funds raised through purchases on reed the fincluding commercial paper and debentures), WC1sNewE4 (WC5): share of finance from funds raised through purchases on reed the fincluding commercial paper and debentures), WC1sNewE4 (WC5): share of fi

Table C60: Source of finance of working capital (extensive and intensive margin) (sample with non-missing observations for both intra-firm imports and exports)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
	-0.169^{**}	-0.0267	0.0310	0.229^{*}	-0.0583	0.0557	0.412^{***}	0.578^{***}
	[0.067]	[0.056]	[0.087]	[0.12]	[0.14]	[0.064]	[0.14]	[0.045]
Obs	493	493	493	493	493	493	493	493
$Pseudo - R^2$	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.27
Log-likelihood	-280.2	-282.8	-282.9	-281.2	-282.8	-282.6	-280.5	-248.9
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
	-0.388***	-0.147	-0.0920	0.197	-1.647^{***}	0.377^{**}	3.038	2.652^{***}
	[0.10]	[0.14]	[0.24]	[0.38]	[0.63]	[0.19]	[2.26]	[0.54]
Obs	489	489	489	489	489	489	489	489
$Pseudo - R^2$	0.19	0.17	0.17	0.17	0.17	0.17	0.17	0.28
Log - likelihood	-274.3	-280.6	-281.0	-281.0	-278.3	-279.2	-279.4	-243.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: $D_{WC1ntFund}$ (D_{WC1}): internal funds/retained earnings (dummy), $D_{WCBorBankIns}$ (D_{WC2}): borrow from banks in the host country (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from fanks outside the host country (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from fanily/friends/individual lenders (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from fanily/friends/individual lenders (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from fanily/friends/individual lenders (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from banks outside the host country (dummy), $D_{WCBorRankIns}$ (D_{WC2}): borrow from fanily/friends/individual lenders or new debt (including commercial paper and debentures) (dummy), $D_{WCParent}$ (D_{WC3}): browgh the parent company (dummy), D_{WCI}): share of finance from borrowed funds from banks in the host country, WCBorBankIns (WC2): share of finance from borrowed funds from banks in the host country, WCBorBankIns (WC3): share of finance from borrowed funds from banks in the host country, WCBorBankIns (WC5): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), WCPurchCredit (WC6): share of finance from funds raised through purchases on credit from suppliers and advances from customers, WCIsNSNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, WCISNSNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances from custom

Table C61: Source of finance of working capital (extensive and intensive margin) (control for years since set-up of the firm)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
	-0.155***	-0.0385^{*}	-0.0266	-0.0183	-0.0711	-0.00907	0.0943	0.480^{***}
	[0.035]	[0.023]	[0.037]	[0.043]	[0.053]	[0.027]	[0.093]	[0.045]
firmAge	0.00428	-0.00291	-0.00420	-0.00312	-0.00273	-0.00302	-0.00303	0.0104
	[0.016]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]
Obs	1575	1575	1575	1575	1575	1575	1575	1575
$Pseudo - R^2$	0.22	0.21	0.20	0.20	0.21	0.20	0.21	0.27
Log-likelihood	-716.7	-726.9	-728.0	-728.2	-727.4	-728.2	-727.7	-666.6
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
	-0.191***	-0.113**	-0.104	-0.102	-0.303	0.0728	0.365	0.783^{***}
	[0.042]	[0.057]	[0.11]	[0.14]	[0.23]	[0.078]	[0.23]	[0.071]
firmAge	0.000591	-0.00623	-0.00767	-0.00619	-0.00496	-0.00588	-0.00587	0.0136
	[0.016]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]
Obs	1556	1554	1552	1553	1552	1553	1552	1553
$Pseudo - R^2$	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.27
Log - likelihood	-709.6	-716.6	-716.6	-717.7	-715.6	-717.0	-715.6	-653.6

Table C62: Source of finance of working capital (extensive and intensive margin) (add dummies for firm age)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
-	-0.148^{***}	-0.0264	-0.0293	-0.00287	-0.0429	0.00338	0.0754	0.499^{***}
	[0.036]	[0.023]	[0.036]	[0.045]	[0.057]	[0.028]	[0.095]	[0.047]
Obs	1524	1524	1524	1524	1524	1524	1524	1524
$Pseudo - R^2$	0.25	0.24	0.23	0.23	0.23	0.23	0.23	0.30
Log-likelihood	-667.6	-677.1	-677.4	-677.7	-677.4	-677.7	-677.3	-617.4
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
-	-0.202***	-0.0945	-0.121	-0.0569	-0.173	0.105	0.350	0.768^{***}
	[0.042]	[0.059]	[0.11]	[0.14]	[0.21]	[0.078]	[0.25]	[0.071]
Obs	1504	1503	1501	1502	1501	1502	1501	1502
$Pseudo - R^2$	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.30
Log - likelihood	-660.3	-668.9	-667.7	-669.0	-667.5	-668.1	-667.1	-608.3

 $\label{eq:linear_line$

Table C63: Source of finance of working capital (extensive and intensive margin) (manufacturing sector)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{WC1}	D_{WC2}	D_{WC3}	D_{WC4}	D_{WC5}	D_{WC6}	D_{WC7}	D_{WC8}
	-0.182^{***}	-0.0429	0.0574	0.0653	-0.0943	-0.0273	0.0637	0.561^{***}
	[0.051]	[0.035]	[0.068]	[0.072]	[0.098]	[0.041]	[0.14]	[0.054]
Obs	869	869	869	869	869	869	869	869
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.23
Log-likelihood	-449.0	-455.2	-455.5	-455.5	-455.4	-455.7	-455.8	-414.6
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	WC1	WC2	WC3	WC4	WC5	WC6	WC7	WC8
	-0.275^{***}	-0.104	0.160	0.0188	-0.952**	0.0693	0.122	1.256^{***}
	[0.065]	[0.088]	[0.16]	[0.20]	[0.40]	[0.12]	[0.43]	[0.15]
Obs	866	865	863	864	863	864	863	863
$Pseudo - R^2$	0.17	0.15	0.15	0.15	0.16	0.15	0.15	0.24
Log – likelihood	-445.3	-451.1	-450.7	-453.0	-448.4	-451.2	-450.8	-405.4

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Panel A: Dependent variable: $D_{WCIntFund}$ (D_{WC1}): internal funds/retained earnings (dummy), $D_{WCBorBankIns}$ (D_{WC2}): borrow from banks in the host country (dummy), $D_{WCBorBankOuts}$ (D_{WC3}): borrow from banks outside the host country (dummy), $D_{WCBorFan}$ (D_{WC2}): borrow from banks outside the host country (dummy), $D_{WCBorFan}$ (D_{WC2}): borrow from banks outside the host country (dummy), $D_{WCBorFan}$ (D_{WC4}): borrow from non-bank financial institutions (e.g. equity funds) (dummy), $D_{WCPurchCredit}$ (D_{WC6}): through purchases on credit from suppliers and advances from customers (dummy), $D_{WCIssNewEq}$ (D_{WC7}): through he parent company (dummy). Panel B: Dependent variable: WCIntFund (WC1): share of finance from internal funds/retained earnings, WCBorBankIns (WC2): share of finance from borrowed funds from banks outside the host country, WCBorFankOuts (WC3): share of finance from borrowed funds from banks outside the host country, WCBorFankOuts (WC3): share of finance from borrowed funds from banks outside the host country, WCBorFankOuts (WC3): share of finance from borrowed funds from banks outside the host country, WCBorFankOuts (WC3): share of finance from borrowed funds from banks outside the host country, WCBorFankOuts (WC3): share of finance from borrowed funds from bars at advances from customers, WCIssNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, WCIssNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, WCIssNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, WCIssNewEq (WC7): share of finance from funds raised through purchases on credit from suppliers and advances

Table C64: Source of finance of fixed assets (extensive and intensive margin) (sample with non-missing observations for either intra-firm imports or exports)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.138^{***}	-0.0478	-0.0163	0.00408	-0.155^{**}	0.0113	-0.0615	0.558^{***}
	[0.036]	[0.031]	[0.049]	[0.060]	[0.064]	[0.050]	[0.11]	[0.042]
Obs	1300	1300	1300	1300	1300	1300	1300	1300
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.23
Log-likelihood	-682.7	-689.2	-690.4	-690.4	-688.5	-690.4	-690.3	-622.1
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.227^{***}	-0.0984	-0.138	-0.0651	-0.658^{***}	0.0972	-0.445	0.973^{***}
	[0.051]	[0.068]	[0.14]	[0.17]	[0.25]	[0.13]	[0.37]	[0.10]
Obs	1267	1268	1266	1267	1266	1267	1267	1267
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.23
Log - likelihood	-663.2	-670.5	-670.7	-672.1	-667.9	-671.1	-670.6	-611.2

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: $D_{FAIntFund}$ (D_{FA1}): internal funds/retained earnings (dummy), $D_{FABorBankIns}$ (D_{FA2}): borrow from banks in the host country (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from banks outside the host country (dummy), $D_{FABorFam}$ (D_{FA4}): borrow from family/fiends/individual lenders (dummy), $D_{FABortNonBank}$ (D_{FA5}): borrow from non-bank financial institutions (e.g. equity funds) (dummy), $D_{FAPurchCredit}$ (D_{FA6}): through purchases on credit from suppliers and advances from customers (dummy), $D_{FAIssNcwEq}$ (D_{FA7}): through hew equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FAParent}$ (D_{FA8}): through the parent company (dummy). Panel B: Dependent variable: FAIntFund (FA1): share of finance from internal funds/retained earnings, FABorBankIns (FA2): share of finance from borrowed funds from banks outside the host country, FABorFam (D_{FA4}): share of finance from family/friends/individual lenders; FABorBankIns (FA4): share of finance from borrowed funds from banks outside the host country, FABorFam (FA4): share of finance from borrowed funds from banks outside the host country, FABorFam (FA4): share of finance from family/friends/individual lenders, FABorBank(Ins (ref A6): share of finance from borrowed funds from solutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from funds raised through purchases on credit from suppliers and advances from customers, FAIssNewEq (FA7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, FAIsNewEq (FA7): share of finance from funds raised through purchases or new debt (including commercial paper and debentures), FAParent(FA8); share of finance from funds raised through new equity shares or new debt (including commercial paper and debentures), FAParent (FA8);

Table C65: Source of finance of fixed assets (extensive and intensive margin) (sample with non-missing observations for both intra-firm imports and exports)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.149^{**}	0.0297	-0.0414	0.226^{*}	-0.0820	0.204^{**}	0.198	0.609^{***}
	[0.063]	[0.060]	[0.082]	[0.13]	[0.17]	[0.093]	[0.23]	[0.040]
Obs	493	493	493	493	493	493	493	493
$Pseudo - R^2$	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.29
Log-likelihood	-280.3	-282.8	-282.8	-281.3	-282.8	-280.7	-282.5	-242.1
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.448^{***}	0.0894	-0.332	0.273	-0.958^{**}	0.419^{*}	0.347	1.752^{***}
	[0.098]	[0.13]	[0.24]	[0.37]	[0.47]	[0.25]	[0.82]	[0.29]
Obs	480	480	480	480	480	481	481	481
$Pseudo - R^2$	0.20	0.17	0.17	0.17	0.17	0.17	0.28	
Log - likelihood	-264.6	-274.6	-273.8	-274.6	-273.0	-273.7	-275.1	-238.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: $D_{FAIntFund}$ (D_{FA1}): internal funds/retained earnings (dummy), $D_{FABorFankIns}$ (D_{FA2}): borrow from banks in the host country (dummy), $D_{FABorFankIns}$ (D_{FA3}): borrow from family/friends/individual lenders (dummy), $D_{FABorFankIns}$ (D_{FA3}): borrow from family/friends/individual lenders (dummy), $D_{FABorFankIns}$ (D_{FA3}): borrow from family/friends/individual lenders (dummy), $D_{FABotFankIns}$ (D_{FA3}): borrow from mans outside the host country (dummy), $D_{FABorFankIns}$ (D_{FA3}): borrow from family/friends/individual lenders (dummy), $D_{FABotNonBank}$ (D_{FA5}): borrow from non-bank financial institutions (e.g. equity funds) (dummy), $D_{FAParchCredit}$ (D_{FA6}): through purchases on reed the (including commercial paper and debentures) (dummy), $D_{FAParent}$ (D_{FA3}): through the parent company (dummy). Panel B: Dependent variable: FAIntFund (FA1): share of finance from horrowed funds from banks so utside the host country, FABorFankCrus (FA4): share of finance from borrowed funds from banks outside the host country, FABorFankOuts (FA4): share of finance from borrowed funds from banks outside the host country, FABorFankCrus (frad): share of financial institutions (e.g. equity funds), FAPurch(FA6): share of finance from borrowed funds from banks early from borrowed funds from banks from customes, FAIsNsWEF (FA6): share of finance from funds raised through purchases on reed to from bank from and banks from shares from customes, FAParent (FA8): share of finance from funds raised through purchases on ree

Table C66: Source of finance of fixed assets (extensive and intensive margin) (control for years since set-up of the firm)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.110***	-0.0328	-0.0222	0.0193	-0.119^{***}	0.00966	-0.0446	0.479^{***}
	[0.030]	[0.024]	[0.037]	[0.049]	[0.042]	[0.039]	[0.087]	[0.046]
firmAge	-0.000367	-0.00246	-0.00392	-0.00349	-0.00381	-0.00310	-0.00368	0.0101
	[0.016]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]
Obs	1575	1575	1575	1575	1575	1575	1575	1575
$Pseudo - R^2$	0.21	0.21	0.20	0.20	0.21	0.20	0.20	0.27
Log-likelihood	-720.6	-727.3	-728.1	-728.2	-726.3	-728.2	-728.1	-665.6
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.185^{***}	-0.0633	-0.142	0.00273	-0.559^{***}	0.0610	-0.346	0.682^{***}
	[0.040]	[0.053]	[0.11]	[0.13]	[0.20]	[0.10]	[0.30]	[0.067]
firmAge	0.00134	-0.00272	-0.00508	-0.00290	-0.00297	-0.00314	-0.00414	0.0121
	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.017]	[0.016]
Obs	1529	1529	1527	1528	1527	1528	1528	1529
$Pseudo - R^2$	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.26
Log - likelihood	-699.3	-707.7	-707.3	-708.9	-704.3	-708.1	-707.6	-651.5

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Panel A: Dependent variable: $D_{FAIntFund}(D_{FA1})$: internal funds/retained earnings (dummy), $D_{FABorBankIns}(D_{FA2})$: borrow from banks in the host country (dummy), $D_{FABorBankOuts}(D_{FA3})$: borrow from banks outside the host country (dummy), $D_{FABorFam}(D_{FA4})$: borrow from family/friends/individual lenders (dummy), $D_{FABorFam}(D_{FA4})$: borrow from family/friends/individual lenders (dummy), $D_{FABorFam}(D_{FA4})$: borrow from suppliers and advances from customers (dummy), $D_{FAIssNewEq}(D_{FA4})$: through new equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FAParent}(D_{FA4})$: through new equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FABorFam}(D_{FA4})$: share of finance from internal funds/retained earnings, FABorBankIns (FA2): share of finance from borrowed funds from banks in the host country, FABorFam (FA4): share of finance from borrowed funds from banks in the host country, FABorFam (FA4): share of finance from borrowed funds from family/friends/individual lenders, FABotNonBank (FA5): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from form non-bank financial institutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from borrowed funds from banks in the host country, FABorFam (FA4): share of finance from borrowed funds from banks in the host country, FABorFam (FA4): share of finance from borrowed funds from bark (FA5): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from funds raised through purchases on reedit find suppliers and advances from customers, FAIssNewEq (FA7): share of finance from funds received from the parent company. Control for main firm characteristics and firm age (firmApe). Dummies take value 1 if the statement ho

Table C67: Source of finance of fixed assets (extensive and intensive margin) (add dummies for firm age)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.0915^{***}	-0.0201	-0.0281	0.0452	-0.0930**	0.0305	-0.0603	0.487^{***}
	[0.030]	[0.025]	[0.036]	[0.052]	[0.047]	[0.041]	[0.077]	[0.046]
Obs	1524	1524	1524	1524	1524	1524	1524	1524
$Pseudo - R^2$	0.24	0.23	0.23	0.24	0.24	0.23	0.23	0.30
Log-likelihood	-672.6	-677.3	-677.4	-677.2	-676.6	-677.3	-677.4	-617.7
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.186^{***}	-0.0600	-0.174	0.0620	-0.437**	0.110	-0.388	0.672^{***}
	[0.041]	[0.056]	[0.11]	[0.13]	[0.20]	[0.10]	[0.29]	[0.066]
Obs	1478	1479	1477	1478	1477	1478	1478	1478
$Pseudo - R^2$	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.29
Log - likelihood	-650.9	-659.3	-658.4	-660.0	-656.9	-658.8	-658.6	-606.4

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Dummies for firm age also included in regressions in all columns. Panel A: Dependent variable: $D_{FAIntFund}(D_{FAI})$: internal funds/retained earnings (dummy), $D_{FABorBankIns}(D_{FAI})$: borrow from banks in the host country (dummy), $D_{FABorBankIns}(D_{FAI})$: borrow from banks in the host country (dummy), $D_{FABorFankOuts}(D_{FAI})$: borrow from banks outside the host country (dummy), $D_{FABorFankOuts}(D_{FAI})$: borrow from non-bank financial institutions (e.g. equity funds) (dummy), $D_{FAPurchCredit}(D_{FAI})$: through purchases on credit from suppliers and advances from customers (dummy), $D_{FABorRowt}(D_{FAI})$: through new equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FABorRowt}(D_{FAI})$: through new equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FABorRowt}(D_{FAI})$: share of finance from borrowed funds from banks in the host country, FABorBankOuts (FAI): share of finance from bankS outside the host country, FABorFam (FAI): share of finance from borrowed funds from barks in the host country, FABorBankOuts (FA3): share of finance from banks outside the host country, FABorFam (FAI): share of finance from borrowed funds from barrowed funds from non-bank financial institutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), FAPurchCredit (FA7): share of finance from borrowed funds from barrowed funds from anon-bank financial institutions (e.g. equity funds), FAPurchCredit (FA6): share of finance from funds raised through purchases on credit from suppliers and advances from customers, FAISNewEq (FA7): share of finance from funds raised through purchases on credit from suppliers and advances from customers, FAISNewEq (FA7): share of finance from funds raised through purchases on credit from suppliers and advances into experiments, FAISNewEq (

Table C68: Source of finance of fixed assets (extensive and intensive margin) (manufacturing sector)

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	D_{FA1}	D_{FA2}	D_{FA3}	D_{FA4}	D_{FA5}	D_{FA6}	D_{FA7}	D_{FA8}
	-0.150***	-0.0149	0.0514	0.0694	-0.104	0.0256	-0.0901	0.614^{***}
	[0.045]	[0.038]	[0.063]	[0.078]	[0.092]	[0.065]	[0.14]	[0.047]
Obs	869	869	869	869	869	869	869	869
$Pseudo - R^2$	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.25
Log-likelihood	-449.9	-455.8	-455.6	-455.5	-455.3	-455.8	-455.7	-402.7
Panel B	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var: D_{ift}	FA1	FA2	FA3	FA4	FA5	FA6	FA7	FA8
	-0.293***	-0.0129	0.0129	-0.00223	-0.603**	0.124	-0.623	1.113^{***}
	[0.062]	[0.079]	[0.15]	[0.20]	[0.28]	[0.16]	[0.57]	[0.14]
Obs	852	852	851	852	851	851	852	852
$Pseudo - R^2$	0.17	0.15	0.15	0.15	0.15	0.15	0.15	0.24
Log - likelihood	-437.6	-446.5	-446.4	-448.3	-444.4	-446.4	-446.0	-399.8

Notes: Probit estimations with host-country, parent-location and industry dummies in all columns. Sample restricted to firms in manufacturing. Panel A: Dependent variable: $D_{FAIntFund}$ (D_{FA1}): internal funds/retained earnings (dummy), $D_{FABorBankIns}$ (D_{FA2}): borrow from banks in the host country (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from solutions (e.g. equity funds) (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from some source of the host country (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from some source of the host country (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from some source of the host country (dummy), $D_{FABorBankOuts}$ (D_{FA3}): borrow from non-bank financial institutions (e.g. equity funds) (dummy), $D_{FAParchCredit}$ (D_{FA3}): borrow debt (including commercial paper and debentures) (dummy), $D_{FAParent}$ (D_{FA3}): through new equity shares or new debt (including commercial paper and debentures) (dummy), $D_{FABorBankOuts}$ (FA3): share of finance from borrowed funds from banks in the host country, FABorBanKOuts (FA3): share of finance from borrowed funds from banks outside the host country, FABorFankOuts (FA3): share of finance from borrowed funds from banks from non-bank financial institutions (e.g. equity funds), FAParchCredit (FA6): share of finance from borrowed funds from banks in the host country, FABorFankOuts (FA3): share of finance from borrowed funds from banks in the host country, FABorFankOuts (FA3): share of finance from borrowed funds from suppliers and advances from outcomes, FABarChankOuts (FA3): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), FAParchCredit (FA6): share of finance from borrowed funds from non-bank financial institutions (e.g. equity funds), FAParchCredit (FA6): share of finance from funds raised through purchases on red the from suppliers and advances from customers, FAIssNewEq (FA7): share of finance from funds raised throug