IMPLICATIONS OF STATIC AND DYNAMIC EFFECTS OF ECONOMIC INTEGRATION FOR INVESTMENT INFLOWS AND OUTFLOWS USING THEORIES ON INDUSTRIAL LOCATION: A THEORETICAL DEBATE

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ABSTRACT

Both the static and dynamic effects of economic integration have implications for investment inflows into a regional group, as well as relocation of investment by firms already domiciled in the regional group. Therefore, economic integration theory has become increasingly concerned about the locational effects of economic integration arrangements, thus giving rise to the growing interest by trade theorists in the importance of geography. New models of trade which incorporate factor mobility, external economies of scale and product competition, have established the importance of location in the analysis of the effects of economic integration arrangements. This research article therefore seeks to examine the implications of economic integration for industry location given the various theoretical debates with regard to locational choices of industries. This is done by reviewing theoretical arguments based on the Traditional theory of industrial location, the Marshallian theory, the theory of New economic geography, Weber’s theory and Dunning’s ownership, location and internalisation (OLI) theory. Arguments are thus presented to illustrate and explain how the static and dynamic effects of economic integration motivate industry location by creating the locational factors which the respective industry location theories present as key determinants for industry location. By examining the interplay between the key locational factors in the various theories and the static and dynamic effect of economic integration, this study shows that by viewing the theories of industrial location theories separately, each theory alone cannot answer adequately the question of industrial location and even agglomeration, despite highlighting and clarifying relevant factors. Therefore, the various theories must be integrated in order to understand the dynamics with which economic integration has implications for investment flows.

Keywords: Static and dynamic effects of economic integration; Marshallian theory; New economic geography theory; Weber’s theory; Dunning’s OLI theory

INTRODUCTION

The basic theory of customs union, first presented and explained by Viner in 1950 and later extended and modified by Meade in 1956, Lipsey in 1957 and 1960, Gehrels in 1956-1957, and others, provides the theoretical foundation on which the theory of integration rests. Viner’s (1950) analysis was modified and added to by relaxing some of the more limiting assumptions on which it rested, preparing the way for a deeper understanding of the economic integration process. The theory of economic integration was strengthened by the incorporation of economies of scale and terms of trade effects. Furthermore, the emergence of the new trade theories led to additional significant contributions to advance the theory by extending the analysis to incorporate the effects of increasing returns and imperfect competition. As economic integration arrangements are formed and mature, both static and dynamic effects of economic integration will arise; and with increased factor mobility between member states, different locational factors would come into play in deciding where investment is going to be located. Therefore, economic integration theory has become increasingly concerned about the location effects of economic integration arrangements, thus giving rise to the growing interest of trade theorists in the importance of geography. New models of trade incorporating the effects of factor mobility, external economies of scale and product competition, have established the importance of location in the analysis of the effects of economic integration arrangements.

Given the growing interest and concern of location effects of integration, it becomes important to consider the implications of economic integration for industry location given the various theoretical debates with regard to locational choices of industries. This research article therefore seeks to contribute to this area of research by examining the static and dynamic effects of economic integration and how together with key factors in various theories of industry location influence the location of industries in an economic integration arrangement. There is no shortage of theories that try to explain the location of industries in general and agglomeration of industries in particular. The research article will therefore show that for each theoretical framework, even if all the conditions are met and industrial location and even agglomeration takes place; it does not mean that all the conditions have been met for that industrial location and agglomeration to continue in a locality and remain competitive. Therefore, each theory alone cannot answer the question of industrial location and even agglomeration, despite highlighting and clarifying relevant factors. Thus, the various theories must be integrated, as it may be difficult to understand the dynamics with which economic integration has implications for foreign direct investment flows by viewing the theories of industrial location theories separately.

METHODS

This research reviews literature and debates on the various theories of industrial location; as well as the static and dynamic effects of economic integration. Arguments are presented to illustrate and explain how the static and dynamic effects of economic integration motivate industry location by creating the locational factors which the respective industry location theories present as key determinants for industry location. Discussions are presented that illustrate and explain the interplay between key locational factors in the various theories for industry location and the static and dynamic effects of economic integration and how this interplay influences the location of industries in an economic integration arrangement. The industry location theories selected and reviewed...
are the Traditional theory of industrial location, the Marshallian theory, the theory of New economic geography, Weber’s theory and Dunning’s ownership, location and internalisation (OLI) theory.

A BRIEF REVIEW OF THEORETICAL DEBATES ON INDUSTRIAL LOCATION

Some of the relevant theories that try to explain the location of industries are reviewed and explained briefly in this section. These include the traditional theory of industrial location, the Marshallian theory, the theory of New economic geography, Weber’s theory and Dunning’s ownership, location and internalisation (OLI) theory.

The traditional theory of industrial location
The traditional theory of industrial location notes that the key factors for industry location are profit maximisation, transport costs, labour costs, economies of scale; concentration of market inputs, availability of markets of products and agglomeration economies. Other things being equal, profit maximisation (maximising revenue over costs) is often viewed as a dominant factor as industry would locate in a region with the lowest production costs. With other locational factors held constant, minimising transport costs would be significant in location of industries. Therefore, if the transport costs on the supply (or material inputs) is higher than on the finished product, a supply-oriented location of the plant will occur. However, if the transport costs on the final product is higher than on the supply, a market-oriented location of the plant will occur. Labour costs are an important locational factor for industries, although some industries locate in regions with relatively expensive labour due to other cost items that have varying significant influences. Where labour and transport costs are the only significant locational variables, cheap-labour locations are relatively more attractive to industries with high labour coefficients than those with low ones. This is because, ceteris paribus, the higher an industry’s labour coefficient, the more likely it is that the labour savings it could achieve by locating in a cheap-labour region would be greater than the additional transport costs it would incur by not locating on a minimum cost site. Large markets and economies of scale with more efficient production are most likely to lead to market-oriented locational decisions. In this regard therefore, economies of scale, availability of markets and agglomeration economies become key factors in industry location. The industry location pulling effect of the concentration of material inputs varies according to the nature of the finished product, transport costs, and other locational variables that have to be taken into account (Karaska and Bramhall, 1969; Karaska, 1969; Isard, 1956, 1960; Mueller and Morgan, 1969; Alonso, 1969; Weber, 1929). Thus, given the varying strength and pulling forces which the various factors briefly explained above exert on the location of the industries, the location of the operations is determined at the equilibrium of these pulling forces.

The Marshallian theory
Alfred Marshall developed the Marshallian theory in 1920. The theory proposes three different types of transport costs (i.e. the costs of moving goods, people, and ideas), and that these can be reduced by industrial agglomeration. Therefore, three different types of agglomeration externalities are significant factors for locational choice, viz. (i) the benefits of a large pool of skilled labour; (ii) easy access to local customers or suppliers; and (iii) local knowledge spillovers. It is argued that firms will locate near suppliers or customers to save the costs of moving goods through supplier linkages. Labour market pooling ensures the provisions of non-tradable specialised inputs and explains clustering due to the advantages which people following the same skilled trade get from nearness to one another, and improvements in labour organisation (such as labour division or labour market specialisation) to make production more efficient. With regard to intellectual spillovers, it is argued that in agglomerations, industries locate near one another to learn and to speed their rate of innovation as firms specialise in particular phases of the productive process from whereon they interact in an exchange process (Diodato, et al., 2018; Inamizu and Wakabayashi, 2013; Ravix, 2014; Gauselmann, et al, 2011; Ellison, et al., 2010; Marshall, 1920).

The theory of new economic geography
Krugman firstly developed the theory of new economic geography in 1991. It is argued that the location decision is influenced positively by the perceived demand and negatively by the production costs and the intensity of local competition. There are four key elements, i.e. increasing returns of scale, monopolistic competition due to scale returns, transport costs, and technological externalities between companies. The theory also acknowledges the role played by dynamic factors like: trade costs and wages; availability of a big market; backward and forward linkages like industry input-output relations where the final product of one firm is an intermediate input of the other firm in the same sector; network effects between multiple foreign subsidiaries and other forms of interdependence; non-pecuniary factors; regional transfers of human capital; research and development and localised technological progress. The interaction of these key elements explains the attraction and persistence of an economic activity. The presence of these factors in a location makes it more attractive and possibly lure industries away from other locations. This would result in an increasing concentration of industry in some regions, thus leading to agglomeration economies, while industry concentration declines in other locations (Popovici and Călin, 2014; Procher, 2011; Gauselmann, et al, 2011; Kottaridi and Thomakos, 2007; Hess, 2004; Disdier and Mayer, 2004).

This is the ratio of labour cost per unit (at existing locations) to the local weight of that unit. The locational weight is the sum of the required weights of localised raw material plus product (Isard, 1960:246).

Non-pecuniary factors include those factors that have no obvious effect on the money value of costs and revenues, e.g. personal preferences for a location due to good schools, housing, recreational facilities, etc. Other factors include those whose impact on costs and revenues is indirect, and cannot be quantified, e.g. industrial climate, business contacts, infrastructure, future market trends, legislation, etc. (Mueller and Morgan, 1969:430).
Weber’s theory of the location of industries
This is a theory developed by Alfred Weber in 1929. This theory argues that the location of businesses is determined in terms of minimising transportation costs (i.e. transport costs of delivering raw materials and the final product), as transportation is the most important element of the model1. He notes that the economy of labour and economy of agglomeration have an adjustment effect, and as such are the causes for deviation from the point of minimising transportation costs. For example, Location Y is determined in terms of minimising transportation costs; however, it may be better to move to a different location, depending on the savings of labour cost. Therefore, where a location (e.g. X) yields greater savings in labour than the increase in transportation costs, it is more desirable for the operation to be based at location X than at location Y. Another reason for the location deviating from the point of minimal transportation costs is the economy of agglomeration2, i.e. agglomeration resulting from economising on transportation or labour. It is argued that profit from savings in transportation and labour costs has always been characteristic of particular localities (Inamizu and Wakabayashi, 2013:17; Friedrich, 1929). Therefore, according to Weber’s theory, transport costs, labour costs, and agglomeration economies are the three main factors that influence industrial location. Location thus implies an optimal consideration of these factors.

Dunning’s Ownership Location and Internalisation (OLI) model
The Dunning’s paradigm, often called by the OLI paradigm, explains that multinational firms decide to undertake foreign direct investment abroad in the presence of variables related to the Ownership specific advantages, Location-specific advantages and Internalisation advantages.

Ownership-specific advantages are those linked to specialised knowledge including managerial and marketing skills, innovations and technological development including superior products and production processes stemming from a heavy emphasis on R&D, economies of size and competition. Given a firm’s possession of such scarce, unique and sustainable resources and intangible assets or capabilities, these essentially reflect the superior technical efficiency of a particular firm relative to those of its competitors, and thus enables it to generate excess profit. These assets are not location-bound and afford their owners rent-generating ability and competitive advantages. Therefore, ceteris paribus, the greater the ownership-specific advantages of the investing firms, relative to those of other firms, the greater the competitive advantages of the investing firms, relative to those of other firms (especially those located in the country in which they are seeking to make their investments). Thus, this makes the firm more likely to engage in foreign activities or increase its foreign production (Narula et al, 2019; Li and Liu, 2015; Popovici and Călin, 2014; Oexelheim et al, 2001; Dunning, 2001, 2000)

Location-specific advantages are those concerning the economic, political and cultural variables specific to the host countries, as well as resources endowments. These are immobile location-bound endowments or resources associated with particular geographical locations to which the firm desires access for cost or quality reasons. Location-specific advantages are derived from the supply chain (the labour force qualification and cost, the taxation of the companies), the demand chain (the market dimension, its growth and facilities for business development and future business expansion), as well as political and social infrastructure. The foreign investor can benefit by utilising their ownership-specific advantages in conjunction with location-specific advantages of the host location. Therefore, the more the immobile (natural or created) endowments the firms need to use jointly with their own competitive advantages, favour a presence in a foreign location (rather than a domestic location), the more firms will choose to augment or exploit their ownership specific advantages by engaging in foreign direct investment (Narula et al, 2019; Popovici and Călin, 2014; Dunning, 2001, 2000).

Internalisation advantages are those concerned with reducing the costs of transactions, i.e. reasons to keep the activity inside the company rather than, for example, using licensing or inter-firm coalitions as a strategy. Thus, an organisation has to evaluate alternative ways in which it can organise the creation and exploitation of its ownership-specific advantages given the locational advantages of the various regions. Thus, the greater the net benefits of internationalising cross-border intermediate product markets, the more likely the firm would prefer to engage in foreign production (Narula et al, 2019; Popovici and Călin, 2014; Dunning, 2001, 2000).

THEORY OF ECONOMIC INTEGRATION
The theoretical frameworks for the various levels of economic integration (Free Trade Area, Customs Union, Common Market, and Economic Union)3, have their foundation in neoclassical trade theory, with the assumptions adjusted as we move to higher

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1Thus, the strength of the pulling forces of the market and source locations exerted on the location of the operation varies according to the nature of the finished product (the weight ratio between the finished product and the source materials, i.e. the material index = weight of the inputs divided by the weight of the final product/output). The location of the operation is determined at the equilibrium of the pulling forces. If the material index > 1, the location tends to be toward material sources. If the material index < 1, the location tends to be toward the market (Inamizu and Wakabayashi, 2013; Friedrich, 1929).

2Agglomeration resulting from shifting locations due to labour costs or to minimise transportation costs are regarded as “accidental agglomeration” in order to distinguish it from “pure agglomeration,” which occurs when agglomeration itself is used as a means of economizing. Profit from savings in transportation and labour costs exist before agglomeration takes place, while profit from agglomeration exists after agglomeration takes place. (Inamizu and Wakabayashi, 2013:19, 21).

3In a Free Trade Area, all members of the group remove tariffs on each other's products, while at the same time each member retains its independence in establishing trading policies with non-members. In a Customs Union, all tariffs are removed between member states and the group adopts a common external commercial policy toward non-members. In a Common Market, all tariffs are removed between members, there is a common external trade policy with non-members, and all barriers to factor movements among member states are removed. An Economic Union includes all features of a Common Market and in addition, there is the unification of economic institutions and the coordination of economic policy throughout all member countries.

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levels of economic integration. The gains and losses of economic integration are due to its impact on the allocation of resources and international specialisation; the exploitation of scale economies; the terms of trade; the productivity of factors; profit margins; the rate of economic growth and the distribution of income.

The effects of economic integration are classified as static effects and dynamic effects. The static effects of economic integration are divided into trade creation and trade diversion, as coined as such by Jacob Viner (1950). Corden (1972) introduced internal economies of scale into this static framework. The dynamic effects of economic integration are additional welfare effects experienced by participating countries, thus, making it possible for their economic structures and performance to evolve differently than if they had not entered into an economic integration arrangement. Therefore, both static effects and dynamic effects determine the welfare gains associated with economic integration.

Beyond the Customs Union, in addition to the removal of tariffs between member states and having common external tariffs with non-members there is, as noted by Appleyard and Field (2017:389), Marinov (2015:26) and Hailu (2014:300), factor integration between member states which allows for the free movement of factors of production between member states in search of higher rewards. In this regard therefore, additional welfare effects associated with the presence of foreign capital will arise. The effect of foreign direct investment on a country after economic integration would be determined by its impact on the net economic rents earned by foreign enterprises from their use of exclusive assets such as superior technologies, special administrative and entrepreneurial capacities. These assets allow foreign enterprises to produce at lower costs and therefore earn pure or quasi rents (temporary rents). Therefore, where foreign capital is present, the analysis of costs and benefits are no longer limited to trade creation and trade diversion. The additional welfare effects to be considered with the presence of foreign direct investment are investment creation and investment diversion.

Production sharing or fragmentation of the production process has been taking place over the years\(^6\), with different parts of the production process occurring at different locations. Production is fragmented into separate parts which can be located in countries in which factor prices are well matched to the factor intensities of the particular fragments (Jones and Marjit, 2001:363), and such countries are regarded as the lowest cost locations. With fragmented production, there is intra-product specialisation where what is relevant is the factor intensity of the component rather than the factor intensity of the final product (Cattaneo, 2008:8). Key to the growth and success of fragmented production (both at regional and international levels) is the significant reduction of the cost of production in specific locations and the readily availability of improved and reliable services sectors that efficiently support, facilitate, link and coordinate manufacturing at different locations. Therefore, given the importance of fragmented production and trade, this can be examined in the context of economic integration and the implications thereof for investment inflows. The potential effects of economic integration will therefore not be limited to the conventional ones because production sharing and fragmented trade has implications for the static trade creation and trade diversion effects, economies of scale, investment effects and polarisation.

**Static effects of economic integration and implications for divestment/investment**

The static effects of economic integration are trade creation and trade diversion, as coined by Viner (1950), with Corden (1972) introducing internal economies of scale into this static framework. As Kahouli and Kadhraoui (2012:76) noted, the static effects are mainly in terms of productive efficiency and consumer welfare, while Appleyard and Field (2017:390) noted that static effects occur to members directly on the formation of the economic integration arrangement. Each of these has implications for investment or divestment by corporations currently located either within or outside a regional grouping.

(i) **Trade creation and its implications**

Trade creation takes place when a trade agreement leads to a shift in product origin from a higher-cost member supplier to a lower-cost supplier who is part of the agreement. The shift in product origin represents a movement in the direction of free-trade allocation of resources and leads to gains in national welfare (Pasara and Dunga, 2019:52; Appleyard and Field, 2017:390; Gucci et al., 2017:3). Trade creation effect consists of two parts, a production effect and a consumption effect. The production effect (gain in specialisation) is a welfare effect that accrues to the home country through savings in the real cost of goods previously produced domestically, as these are now imported more cheaply from the partner country. The consumption effect (gain from exchange) is a gain in consumer surplus for the consumers in the home country, which results from the substitution of lower-cost imported goods for higher-cost domestically produced goods. This generates an increase in consumers surplus as domestic consumers now experience increased consumption of cheaper partner country substitutes, because at a lower price, an extra amount is purchased on which consumers surplus is obtained (Osa, 2014:9; Robson, 1987:15; Corden, 1972:467-471; Jaber, 1970:254).

Where the economic integration arrangement allows factor mobility between member states (as is the case with economic integration arrangements beyond a Customs Union), trade creation thus has implications for investment relocation. Firms located in the higher-cost member country who would want to supply the regional group and take advantage of the larger and easier to access market created by the economic integration arrangement, would be forced to relocate to the lower-cost member country. In the event that the economic integration arrangement does not allow factor mobility between member states (as in the case of a Free Trade Area and a Customs Union), and a company continues to produce in the higher-cost member country, it will face intense competition from supplying firm(s) in the lower-cost member countries. Therefore, the firms in the higher-cost member country would be forced to divest or close part of their operations, which will be in line with McDermott (1986), Vollner (2016:33) and Khaing (2016) observations, based on Dunning’s eclectic model, that foreign direct divestment takes place when an organisation no longer enjoys net competitive advantages over organisations of other economies. This is also in line with observations by Li

\(^6\)Cattaneo (2008:6) notes that, in recent years, a significant amount of trade expansion has been in fragmented trade (i.e. trade in intermediate and unfinished products), with such trade contributing as much as 30% of global manufacturing trade.
and Liu (2015:82) who pointed to the significant impact of the host market’s demand on divestment, noting that multinational corporations that suffer from deteriorating demand are likely to exit from the country. With trade creation, deteriorating demand occurs for goods produced domestically by firms in the higher-cost country, as these are replaced by cheaper imports from a cheaper lower-cost member country.

Trade creation is more likely to result in industry relocation the closer the member countries are to one another geographically because transport costs tend to reduce the potential benefits of relocating to the lower-cost country. Geographical proximity therefore lowers transport costs, making them less of an obstacle for firms that relocate to the lower-cost country (as well as those already domiciled in such countries), to access the regional market. Furthermore, industry relocation due to trade creation is more likely, the greater the ease of switching from a higher-cost domestic source to a lower-cost member source, as this would ensure a market to the lower-cost member countries. Therefore, both transport costs and switching costs are part of transaction costs, and lower transaction costs serves as a locational advantage, and have implications for foreign direct investment inflows into the regional group, as well as industry relocation by firms already domicile in the regional group. This industry location motivated by reduced transaction costs is in line with the traditional theory of industry location, Weber’s theory, Marshall’s theory, and the theory of New economic geography.

(ii) Trade diversion and its implications
Trade diversion takes place when there is a shift in product origin from a lower-cost supplier outside an economic integration arrangement to a higher-cost supplier who is part of the agreement. This shift in production represents a movement away from the free-trade allocation of resources and could reduce welfare (Pasara and Dunga, 2019:52; Appleyard and Field, 2017:390; Guei et al., 2017:3). For the home country, the trade diversion effect leads to a higher import bill through substitution of higher-cost goods from within the union for lower-cost goods outside the union, and the loss in consumers’ surplus due to the consumption of higher-cost goods from within the union instead of lower-cost goods outside the union. For the lower-cost supplier outside the economic integration arrangement, trade diversion could lead to divestment of some of its operations as it is frozen out of a lucrative market and its products are no longer competitive in the regional group. For the higher-cost member country, trade diversion has implications for increased investment as the member state seeks to meet regional demand and is also shielded from foreign competition. Protection from foreign competition is thus a locational advantage which according to Dunning’s OLI theory motivates industry location.

(iii) Investment diversion and investment creation due to trade creation and trade diversion
In response to trade creation effects, investment diversion occurs. Investment diversion is the movement of foreign direct investment flows within the bloc due to trade creation effects. Investment diversion takes place when foreign direct investment shifts from a relatively efficient location to an inefficient one (Balasubramanyam et al., 2002:463). Kreinin and Plummer (2008:448) noted that investment diversion shifts the world away from its optimal resource allocation because investments that would have been made in a more efficient non-member are invested into a non-efficient member country or countries in the bloc. Thus, as Jovanovic (2014:132) and Marszk (2014:85) noted, foreign investments that member states would have invested in non-member states are now invested within the bloc because of tariff discrimination.

Kindleberger (1966 cited in Tuluce et al., 2016:2) and Marszk (2014:85) noted that investment creation is an increase in foreign direct investment inflows from non-member countries because of trade diversion effects which are brought about by economic integration agreements. Appleyard and Field (2017:298) and Balasubramanyam et al. (2002:463) noted that foreign firms from outside the bloc may wish to invest in productive capacity in the region to avoid the high tariffs and other trade restrictions on their exports as well as to benefit from the increased and easier to access market in the regional group.

Therefore, given this movement of investments, through investment diversion and investment creation, it can be argued that both trade creation and trade diversion have implications for foreign direct investment outflows from non-member countries into the economic integration arrangement. Thus, trade barriers and transport costs, which increase the costs of exporting from outside the regional group and make the products less competitive in the regional group, give rise to location-specific advantages that favour foreign direct investment into the regional group. Thus, industry location in response to these location-specific advantages is in line with Dunning eclectic model’s second sub-paradigm. Furthermore, it should be noted that if the foreign firms have greater ownership-specific advantages relative to firms already domiciled in the economic integration arrangement, this would motivate them even more to locate in the regional grouping so as to utilise the location-specific advantages together with their ownership-specific advantages, which is in line with Dunning’s eclectic model. Also to note is that when existing resources, capabilities and investments in the regional group are augmented by foreign investment inflows, this helps to utilise more fully the underutilised and un-utilised resources and installed industrial capacities. This in turn has implications for the overall growth of the regional group through increased industrial capacity utilisation, industrial expansion, and fostering efficient-scale industrialisation. While foreign investments may, due it competitive advantages, replace domestic investments in order to benefit from lower production costs that result from the enlarged market, Kreinin and Plummer (2008:448) noted that investment creation is favourable to welfare because it moves production and resource allocation in the direction of increased efficiency. This would also benefit the foreign investor as it augments its current activities in its home country and other locations.

(iv) Corden’s (1972) economies of scale and implications
Corden (1972) introduced internal economies of scale into the static framework of the effects of economic integration, noting that with the formation of a customs union, internal economies of scale could arise. While the orthodox concepts of trade creation and trade diversion are still relevant in evaluating a customs union, Corden (1972) argued that, in the presence of internal economies of scale, two other effects need to be considered and these are the cost reduction effect and the trade suppression effect.
With economic integration, the more efficient member state would stand to gain from increased sales to other union members. The less efficient member states would experience a trade creation gain because their expensive domestic production would be replaced by a cheaper source of supply from the more efficient member state, as noted by Corden (1972:467) and Mutambara (2013:136). For the more efficient member state, the average cost per unit of domestic output would reduce because of the increase in domestic output (Corden, 1972 cited in Peiris et al., 2015:55) to meet the regional demand. Therefore, the more efficient country enjoys a cost-reduction gain as it now obtains its domestic supplies at a lower cost of production. While the cost-reduction effect is a consequence of the creation of trade with member states, it is not an orthodox trade creation effect because it is as a result of the cheapening of an existing supply and not a movement to a cheaper source of supply in another country (Corden 1972:467-8; Robson, 1987:38).

Corden (1972) noted that, in the presence of internal economies of scale, the formation of a union could lead to a trade suppression effect. He argued that the higher-cost member would cease production and the more efficient member would emerge and begin to produce for the entire union, a process referred to as production reversal. The higher-cost member experiences a trade creation gain (production effect + consumption effect). The newly emerged more efficient member state experiences a trade suppression effect, as its domestic production would replace the cheaper source from outside the union. This is similar to trade diversion (a dearer member source replacing a cheaper non-member source), but it is the newly established domestic producers in the newly emerged more efficient member country that have replaced the cheaper source and not another member of the union (Corden, 1972:468; Mutambara, 2013:137).

In Corden’s (1972) analysis, just as in the traditional trade creation analysis, the higher-cost member would cease production, as domestic production would be replaced by a cheaper source of supply from the more efficient member state. Therefore, just as in the traditional trade creation analysis, this has implications for divestment by the higher-cost producer as they cease to be competitive. However, the internal economies of scale that lead to cost-reduction gain (which thus enhances competitiveness) and the trade suppression effect do not have implications for foreign direct investment inflows from fellow member states into more efficient member states in an economic integration arrangement. This is because, the economies of scale are internal to the lower-cost producer, and as Inamizu and Wakabayashi (2013:22) noted, “business cannot use profit from internal economies to invite other businesses into its locality, because that profit is only available to that business and there is no direct profit to other businesses”. The newly established domestic producers in the newly emerged more efficient member country would continue to engage in what Steenhuis (2009:10) called “active investments” aimed at exploiting its competitive advantage. However, the trade suppression effect and production reversal have implications for divestment in the source outside the union (if the regional market is its significant market) since the domestic producer in the newly emerged more efficient member country replaces the cheaper source from outside the union and supplies the regional market.

(v) Implications of production sharing and fragmented trade in the context of trade creation and trade diversion effects

When there is production sharing in a preferential tariff arrangement, this mitigates any trade diversion consequences of integration. In the conventional framework, a shift of imports from the lower-cost non-member country to a higher-cost member (e.g. Country X), is trade diversion. With production sharing within a regional grouping, imports of the finished products from the member, Country X, would contain regionally sourced components from member countries that produce such components cheaply. The supplying member, Country X, would, for example, specialise in labour-intensive assembly of the final product, while the other regional countries concentrate in providing the various components in which they respectively have a comparative advantage. Thus, production sharing between Country X and other regional countries, could facilitate factor cost savings which are sufficient enough to reduce trade diversion effects to production, and thus increases opportunities for welfare enhancing economic integration arrangements. Production sharing in the grouping therefore has implications for industry location because trade creation need not lead to the loss of domestic industry (divestment) in a given sector. This is because, as Cattaneo (2008:13) noted, specific member countries may retain production blocks within a given industry, and supply components as per their comparative advantage, although resource reallocation between blocks within the industry will be necessary.

Since in production sharing, the production of particular parts (fragments) takes place in the lowest cost location, this makes it possible for firms to enjoy scale economies at the component level by supplying many final goods suppliers. Thus, least costs of production and the potential for economies of scale are locational advantages that can be utilised in conjunction with ownership-specific advantages, thus attracting investors as per Dunning’s eclectic model. Lowest cost location is also a key locational factor from the perspective of the traditional theory of industrial location, which leads to a supply-oriented location of the plant if the transport costs on the supply (or material input) is higher than on the finished product, or a market-oriented location if the transport costs on the final product are higher. Locating the production plant for particular fragments at the lowest cost location is also consistent with Weber’s theory, which argues that location of business is determined in terms of minimising transportation costs.

A high-quality local transportation infrastructure and a reliable commercial services sector are essential for production and fragmented trade. This is so because with production at each stage taking place in the lowest cost location, a good and reliable infrastructure services sector would facilitate and link manufacturing at the different locations and the final goods producers. This would in turn motivate increased investment by firms in their respective locations, thus reducing possible polarisation effects.

Dynamic effects and implications for industry location

Apart from static effects, welfare effects also arise due to dynamic effects of economic integration. Hosny (2013:139) and Jaber (1970:254) regarded dynamic effects of economic integration as various possible ways in which economic integration affects a country’s rate of growth due to the increased market size. Appleyard and Field (2017:398) suggested that the dynamic effects of economic integration are the factors which cause “the economic structure and performance of participating countries to evolve differently than if they had not been integrated”. Thus, the dynamic effects influence the rate of long-term growth of member

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countries, as noted by Kahouli and Kadhraoui (2012:76, 77). Carin (1997:338) noted that the possible reduction in income and welfare due to trade diversion might be reduced or even outweighed if the long-term dynamic influences on regional production, consumption and investment are taken into account.

(i) A large and easier to access market
A reduction in trade barriers in economic integration arrangements creates new and more accessible larger markets with less risk, reduced uncertainties and transaction costs, a more competitive business environment which enables increased competition from foreign and local investment, and the possible reduction in monopolistic markets (Appleyard and Field, 2017:398). Apart from an increased market size due to a larger pool of consumers, Hartzenberg, et al (2012:286) added that integration arrangements provide greater availability of relevant factors of production, while removing tariffs lowers costs of production as input costs are reduced. Therefore, a conducive business environment is created which enables a favourable location-specific advantage for an economic integration arrangement. For foreign firms with ownership-specific advantages and currently operating outside the regional group, this business environment is an endowment, which in line with Dunning’s eclectic model, would attract them into the region, as they would benefit from utilising their ownership-specific advantages in conjunction with these location-specific advantages of the region. In addition, foreign investment inflows into the economic integration arrangement would also be due to a firm preferring to engage in foreign production itself rather than license the right to do so. This is because the net benefits of internalising cross-border intermediate product markets would be greater as the foreign investors may be concerned with reducing the costs of transactions, and this is in line with Dunning’s eclectic model with regard to the internalisation sub-paradigm.

Where an economic integration arrangement has member states which have a wide variety of- and unique factor endowments; this creates a regional grouping which has complementary assets, or related activities which help lower transaction costs and promote joint economies in innovation, production and marketing, as well as asset augmenting activities and strategic networking. Thus, in line with the Marshallian theory, these relevant factors influence industry location, as they are factor endowments which are key for Marshallian type agglomerative economies where dynamic externalities, knowledge accumulation, and interactive learning are important. Agglomeration theories and the theory of new economic geography acknowledge the importance of these location-specific advantages as they are regarded as dynamic factors, which are key forces for agglomeration economies as they can lure industries away from other locations. Both efficiency seeking and strategic asset seeking foreign direct investment, would be attracted to and locate in such a regional group because, as Dunning (2000:176, 177) noted, supply related clusters based on asset augmenting activities, complementary assets, local accumulation of knowledge and easier exchange of information and learning experiences, are essential for such types of foreign direct investment.

The possession of a unique set of immobile natural resources and capabilities as well as the regional grouping’s ability to offer a distinctive and nonreplaceable set of location bound created advantages which include indigenous firms with which foreign investors might form alliances to complement their own core competencies, also attract investment inflows. For resource seeking and extraction-efficiency seeking (supply oriented) foreign direct investment, this is important because the availability of resources at the lowest-cost source, easier access to such resources, as well as supply related clusters based on static external economies like pooled labour markets, and economies of scale are important. Investment location decisions based on this is consistent with the traditional theory of industry location, where the concentration of material inputs, cheaper labour, low transport cost on the supply (material inputs) are key factors to consider, leading to supply-oriented location. The presence of indigenous firms with which to form alliances and complement their core competencies is an additional advantage that makes such locations strategic locations.

The reduction of both transport costs and artificial barriers to most forms of trade leads to more efficiency seeking foreign direct investment inflows, for either product or process specialisation, as they pursue more efficient division of labour or specialisation of an existing portfolio of foreign and domestic assets. Increased efficiency and specialisation would have ripple effects in attracting even more efficiency-seeking foreign investment. As the inefficient monopolies face stiff competition from more efficient firms entering the region, they would be forced to divest as it becomes less beneficial to remain in some markets as they lack any competitive advantage. Market seeking (demand oriented) foreign direct investment would be attracted into the regional grouping by the more accessible larger market with reduced transaction costs. This is because such a market facilitates specialisation in various economic activities which enable clustering of products for the convenience of consumers, including industrial consumers, as well as economies of scale and scope in production, marketing and other commercial activities. All these are locational advantages essential for market seeking investment.

Beyond a Customs Union, economic integration facilitates increased economic efficiency and higher factor incomes as a result of the ability of both capital and labour to move from areas of surplus to areas of scarcity (Appleyard and Field, 2017:398; Marinov, 2015:26; Hailu (2014:300). This stimulates and promotes investment from both internal and foreign sources, as firms would be able to move more easily their capital into other member states where capital is scarce and thus yield more returns; and enjoy other locational advantages not available in their current host member countries. Rapid technological progress is experienced as technological advancements in one member country can freely flow across borders into another due to the free movement of labour, capital and technology. Existing organisations that cannot absorb such new technologies would be forced to divest as they lose competitiveness. Furthermore, with increased factor mobility, foreign investors with more productive and advanced technologies and technology capabilities would be in a much better position to harness more fully increasing market opportunities, because as observed by Mabuta (2011:6), an increase in factor mobility enables faster supply side responsiveness to increasing market opportunities within a regional grouping. Therefore, the challenges often posed by limited supply capacity would be minimised as increased factor mobility would result in an increase in the production of goods that meet regional needs and subsequently more intra-regional trade Also to note is that factor mobility by investors with more productive and advanced technologies and technology capabilities so as to harness more fully the increasing market opportunities in the regional group is in line with Dunning’s eclectic model with regard to ownership-specific advantages.
(ii) Agglomeration effects and industry location

Economic integration arrangements create environments where external economies could emerge. Where there are external economies, other businesses are attracted into the locality because just like the current businesses in that locality, the other businesses can also profit from external economies. The more businesses and operations congregate, the greater the profit; and consequently, external economies have a “cumulative location-drawing effect”, which leads to agglomeration or industry concentration. Therefore, the implications of external economies of scale are two-fold, i.e. foreign direct investment inflows into the regional group as well as investment relocation by firms already domiciled in the regional group. In either case, investment flows into more efficient agglomeration centres as organisations seek to enjoy the external economies resulting from agglomeration effects. The flexible business relationships and free movement of skilled labour between businesses in such localities enable technology to spread; leading to cultivating a climate of innovation in that locality, which is in line with the Marshallian theory. The resulting reduced transaction costs and average cost per unit of production enhances their competitive advantages, while the increased sales to other union members and the easier access to a new and larger market makes the market lucrative enough for investors to internalise these advantages, which is in line with Dunning’s eclectic model with regard to internatisation advantages.

The Customs union theory assumes that each member state should benefit from economic integration based on comparative advantages, as noted by Biswas (2000:75) and Musonera and Ndagijimana (2010:139). Therefore, the formation of an economic integration arrangement would affect member states differently. Thus, in an economic integration arrangement where there are huge discrepancies in the levels of industrial and economic development between member states, those member states with more developed industrial bases would be in a better position to exploit gains from the union. Their highly industrialised manufacturing base, well and highly skilled and entrepreneurial population, and well-developed capital markets and services sector; are attractive locational advantages which, in line with Dunning’s eclectic model, would attract and lure in investors (i.e. those already within and those outside the regional grouping) away from those member states who are less industrialised. As such, industries would tend to cluster in the relatively more developed member states since these states offer substantial internal and external economies of scale. This is in line with the Marshallian theory, Agglomeration theories as well as the theory of new economic geography. Therefore, the mobility of factors allowed in an economic integration arrangement may serve to increase rather than decrease the disparity in incomes between member states and could lead to polarisation effects.

However, if a regional group jointly addresses infrastructure related constraints through regional infrastructure projects as well as through Private Public Partnerships; industrial relocation from the smaller member countries into the member states with well-developed industrial bases in search of agglomeration economies; may not be inevitable. Adequately addressing infrastructure-related constraints, helps in creating a good territory image which provides services that reduce transaction costs in the regional group. As such, this would attract foreign direct investment flows into the regional group, without necessarily leading to polarisation effects, as investors would spread throughout the regional group attracted by location-specific advantages in the various member states and easily access the regional market through the well-developed infrastructure. This is in line with Dunning’s model with regard to location-specific advantages, which argues that when the immobile endowments firms need to use jointly with their own competitive advantages are concentrated in a specific location, the firms are most likely to choose to augment or exploit their ownership-specific advantages by engaging in investment in that particular location. This is also in line with the traditional theory of industrial location, which observes that, ceteris paribus, whatever the advantages a location has would lead to industry location.

Locational advantages would also motivate industries domiciled in smaller member countries to remain in such countries and enjoy the locational benefits therein (e.g. cheaper labour, necessary input resources available and location-specific to the country, etc.,) and still access the markets in the more developed member states through exports. Thus, factor mobility may not lead to divestment from the smaller members states with cheap labour because, in line with Weber’s theory of industry location, depending on the savings of labour cost, where a location yields greater savings in labour than the increase in transportation costs, it is more desirable for the operation to be at the labour cost saving location.

Also to note is the suggestion by McCarthy (1999:393-394) that the mobility of factors may be the force that leads to growth in smaller and less developed countries and convergence. This would occur when a large wage gap develops between the more developed and those that are underdeveloped, such that there will be a point when industry is driven to the low-wage country. Some firms would divest from more developed countries whose wages would have risen, into those that are underdeveloped and have lower wages, as well as foreign investment inflows from outside the region. The implication of this is that polarised development may not be inevitable; instead, there could be a convergence of incomes between member states in the long run. Steenhuis (2009:26, 28) noted that, where the primary reason for establishing a plant in a certain location was access to low-cost production factors, such a plant may easily divest when labour cost increases in that location than a plant that was established to have access to certain types of skills that are available in that location and are not easily available elsewhere. In this case therefore, the higher wage bills that may occur with agglomeration in the more developed countries, would lead to divestment of some plants and relocate to lower-wage countries. Gauselmann (2011:11) also noted that, even though agglomeration economies are expected to increase a region’s attractiveness to foreign investors, a high population density in these localities is also associated with high land prices, which could deter foreign investments since land prices contribute to transaction costs. These observations are in line with the traditional theory of industry location which argues that where labour and transport costs are the only significant locational variables, cheap-labour locations are relatively more attractive to industries with high labour coefficients than those with

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These include, for example, (i) public infrastructure facilities that are created and refined; (ii) profit made by interaction between multiple businesses or operations, e.g. frequent contacts between manufacturers and suppliers; (iii) being able to cope with environmental changes through flexible rearrangement of business relationships due to flexible networks (Inamizu and Wakabayashi, 2013:23).
low ones, because *ceteris paribus*, it is more likely that for such industries, the labour savings they would achieve by locating in a cheap-labour region would be greater than the additional transport costs they would incur by not locating on a minimum cost site.

An economic integration arrangement that enables lower-cost production by providing access to lower-priced input factors, such as labour or raw materials, presents efficiency opportunities to investors; while market access and new and larger market opportunities present market expansion opportunities to investors. With such opportunities, firms might decide to at least partly divest current operations in order to relocate production operations in the regional group so as to benefit from potential efficiency gains and use the market potential and market expansion opportunities to pursue new growth opportunities. The efficiency opportunities created by the regional group give investors the opportunity to put their organisational resources to their best use as they harness lower-priced input factors utilising their superior ownership-specific assets on a wider scale and earn profits. The market expansion opportunities presented by the regional group, enable market-seeking foreign investment to pursue new growth opportunities, and thus achieve profitable geographic and product diversification. Both the regional grouping and the investors benefit from this environment of market potential, market access, and efficiency opportunities.

**CONCLUSION**

This research examined the static and dynamic effects of economic integration and how together with key factors in various theories of industry location influence the location of industries in an economic integration arrangement. The discussions illustrated and explained how the static and dynamic effects of economic integration motivate industry location by creating locational factors which the respective industry location theories present as key determinants for industry location. Thus, the intricate interplay between key locational factors in the theories for industry location and the static and dynamic effects of economic integration influence the location of industries in an economic integration arrangement.

The industry location theories selected are the Traditional theory of industrial location, the Marshallian theory, the theory of New economic geography, Weber’s theory and Dunning’s ownership, location and internalisation (OLI) theory. When each theoretical framework was examined, it was observed that each theory on its own cannot answer fully the question of industrial location and even agglomeration, despite highlighting and clarifying key relevant factors. Thus, the various theories were integrated and used jointly to illustrate and explain more fully the dynamics with which economic integration has implications for investment flows and industry location. This shows that for each theoretical framework, even if all the conditions are met and industrial location and even agglomeration takes place in an economic integration arrangement; it does not mean that all the conditions have been met for that industrial location and agglomeration to continue in a locality and remain competitive.

Both the static and dynamic effect of economic integration have implications for investment flows into a regional group, as well as relocation by firms already domiciled in the regional group. Agglomeration economies and easier access to the economic diversity of the regional group are important driving factors for industrial location by both types of firms. An economic integration arrangement presents efficiency opportunities to investors through lower-cost production and lower transaction costs, by providing easier access to lower-priced input factors such as labour and raw materials; while easier market access to the new and large market, some of which is unexploited, present market expansion opportunities to investors. Free movement of labour and capital enables economies of scale and increased competitiveness, all of which contribute to increased production and production efficiency. High quality local transportation infrastructure and a reliable commercial services sector are essential locational advantages and have a positive impact on the region’s attractiveness to investors as this improves market access due to a better accessibility for potential consumers, customers and suppliers in the periphery.

**REFERENCES**


Mutambara, T.E. (2013). Examining South Africa’s trade with the Southern African Development Community (SADC) with the SADC free trade area initiative in place. MIBES Transactions, Vol 7, No 1, 133-158.


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