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Product Differentiation and Consumer Demand in Local Industrial Goods Market

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Abstract:
The current research analyzes the influence of differentiation in shaping the demands of the buyers for industrial products at the local market level. The traditional understanding assumes that industrial goods are commodities competing with each other on the basis of price and standardization, whereas, based on the theory of Porter, Lancaster, and transactional cost economics, the paper provides a multidimensional concept of differentiation in industrial procurement. In particular, this approach is defined by three types of differentiation, such as technical, spatial, and relational differentiation, which are manifested in the quality and reliability of the goods, geographical closeness and the speed of their delivery, as well as in the relationship between buyers and suppliers. The locality in the industrial procurement is viewed as an attribute of value, providing a potential Local Premium to industrial procurement.
On an empirical basis, the research suggests using a quantitative method that is based on procurement data, industrial surveys, and secondary market data using discrete choice and hedonic price models. Such an approach allows for estimating how certain characteristics of the product or supplier influence the likelihood of purchases and the willingness to pay. At the same time, robustness analysis should ensure that there is no endogeneity and selection bias in the model. In terms of the expected results, one can expect that, in addition to the high technical qualities of the products manufactured by industrial enterprises, the geographical proximity allows for creating more stable demand due to lower transaction costs, greater flexibility in providing services, and reliable purchasing. From this perspective, the current study will make significant contributions to the fields of industrial economics, business-to-business marketing, and localization of supply chains.

Keywords: Product Differentiation; Consumer Demand; Industrial Goods Market; Local Industrial Procurement; Technical Differentiation; Spatial Differentiation; Relational Differentiation; Hedonic Pricing Model; Discrete Choice Model; Transaction Cost Economics; Local Premium; Industrial Economics; Supply Chain Localization.

1. Introduction:

Industrial goods markets have traditionally been depicted as arenas where goods compete on the basis of cost, technology, and efficiency in logistics. In this traditional sense, many locally manufactured industrial goods tend to be regarded as quasi-commodities: interchangeable factors for which demand is primarily driven by cost and technological considerations. However, this traditional perspective has proven increasingly inadequate in modern times. In reality, locally made industrial goods do not merely operate as tradable commodities but as unique resources integrated into complex regional manufacturing networks. Rather than being valued solely based on their own features, such goods are also valued according to their locational relevance to buyers, their ability to enable flexible services, and their ability to provide supply security amidst uncertainties.
This issue becomes especially pertinent in light of the persistent challenges in global manufacturing networks, increasing costs of transport, and heightened concerns about dangers related to procurement.

Purchasers have begun taking into account other considerations in addition to price per unit, such as reliability, punctuality in delivery times, adaptability for customization of the product, technical support, and reliability as a business partner for the long term. Local producers may well have comparative advantages in all of these spheres. Proximity would be able to address the problem of timely delivery, provide prompt maintenance and repair of items, facilitate better coordination between buyer and supplier, and foster trust due to frequent contact. As a result, local industrial products may hold an advantage in consumer demand despite being cheaper.

Although the above issues are of great practical importance, most of the academic literature related to product differentiation and demand tends to concentrate either on final consumer markets or on the issue of competitive advantage at the broad industrial level without sufficiently paying attention to the process of differentiation that occurs in local business-to-business industrial environments. Where such processes occur, they usually receive little attention from academics, who tend to concentrate their efforts mainly on technical performance and purchasing efficiency. However, many economically relevant yet more subtle aspects of purchasing in industry, such as trust and relational embeddedness, are overlooked in current literature. There are no data about interaction between types of differentiation that create demand for local goods.

The purpose of this paper is to suggest that product differentiation in local industrial goods markets is multi-dimensional and ought to be examined in terms of at least three different but interrelated forms of product differentiation. The first form of product differentiation is what can be termed technical product differentiation, by virtue of being concerned with product-related factors like quality, engineering, reliability, durability, customizability, and adherence to industrial standards. The second form of product differentiation is that of spatial product differentiation, whereby geographical proximity leads to shorter lead times, reduced coordination cost, quicker re-supply, and robustness of the supply chain. The third form is that of relational product differentiation, whereby the value in buyer-supplier relationships is harnessed.

The central problem that forms the basis for the present analysis relates to the persistent undervaluation of the importance of differentiation by firms operating within their local environments. Even in the industrial environment where the act of making decisions has been rationalized to a significant extent, the idea that the local procurement source is a symbol of reliability, responsibility, flexibility, and risk reduction can be considered important. Some firms are so focused on competitiveness through prices that they ignore the importance of using the potential for differentiation. Those firms that use the power of differentiation will benefit more as far as demand stability is concerned.

In this regard, this paper highlights the research problem which attempts to establish the relationship between product differentiation and consumer demand in localized industrial ecosystems. This is because the need for understanding this research problem becomes more critical when it is considered that unlike consumer demands, industrial demands in localized environments are not determined by just one attribute. Instead, it can be argued that industrial demands in localized environments are determined by performance attributes, localization attributes, and relational attributes.

The present study can be seen as making contributions in many respects to the literature that exists on the subject. In the first place, by virtue of the theoretical aspects involved in this research, the current study broadens the existing understanding of product differentiation theory by demonstrating the relevance of this notion in industrial procurement, where there is a great deal of interaction, technology involved, and dependency amongst the interacting entities. In the second place, the present study takes up a broader view

of the study of demand for industrial products in local marketplaces by taking into account the nature of such products along with other considerations taken separately.

The conclusions drawn in the paper will have relevance from both the standpoint of theory and practice. From the theoretical angle, this paper becomes the basis for reconsidering the nature of industrial demand, taking into account its social and spatial nature as opposed to the traditional specifications-based approach. In terms of business, the conclusions made provide an understanding of how organizations could position themselves successfully without resorting exclusively to their competitive advantages in terms of cost efficiency. From the point of view of policymakers, it becomes clear which aspects would need to be taken care of to strengthen industrial ecologies in local areas.

In summary, this paper assumes right at the outset that the products produced within industries should not be treated as homogeneous goods. They are unique resources, and the demand for them can be attributed to their technological uniqueness, physical proximity, and relationship-based trust among other factors. By exploring how such differentiations influence procurement processes in local industrial settings, the paper seeks to increase understanding of the workings of industrial markets and their value.

2.Theoretical Framework

The current research is founded on three theoretical approaches that supplement one another: the differentiation strategy approach, Lancaster's demand theory based on characteristics, and transaction cost economics. These theoretical approaches taken collectively create a strong theoretical foundation to understand how local industrial companies create demand advantages in business-to-business environments. Although all theoretical approaches emphasize a distinct mechanism through which demand advantages are created, their collective use is particularly useful when trying to comprehend localized industrial environments, in which purchasing decisions are influenced not only by the quality and pricing of products but also by the service performance, delivery stability, and exchange coordination costs.

2.1 Differentiation Strategy in the Industrial Context

The first pillar in the structure has been established through the approach to Porters five forces model, but focusing on differentiation strategy as one aspect of competitive advantage. It is stated by Porter that a firm could establish competitive advantage over its competitors through three strategic choices, such as cost leadership, differentiation, and focus. In terms of differentiation strategy, it is referred to the state whereby an organization provides unique products/services of sufficient worth to customers such that they prefer to purchase them from the organization rather than competing organizations. While this strategy is primarily concerned with consumer-oriented organizations, it also holds true in industrial markets.

In industry, however, the differentiation process tends to take on forms that are more functionally based and relational in nature compared to consumer goods industries. In industrial products, the purchasers tend to be organizations instead of individuals. Their buying behaviors are related to issues of production, efficiency, and risks. Therefore, the differentiation process in the industrial sector has to take into account characteristics that will impact productivity and procurement assurance in the future. This is why this research seeks to draw a distinction between vertical differentiation and horizontal differentiation.

Vertical differentiation is related to the distinctions in product performance or quality that are objectively rankable. Vertical differentiating factors for an industrial product include aspects such as durability, accuracy of construction, energy savings, technical specification compliance, defect rate, and overall reliability. Vertically differentiated products are associated with better performance or lower costs throughout their life cycle. As a result, even when there exists heterogeneity in tastes, these products

become preferred by customers, who see obvious economic benefits in purchasing. Local suppliers are capable of creating additional demand through higher quality, less likelihood of failure, or increased production efficiency.

Horizontal differentiation, on the other hand, is about features of products and suppliers that may not be objectively superior or inferior but that are more relevant to the tastes or needs of each consumer individually. For example, in the context of business-to-business (B2B) markets, horizontal differentiation might involve product customizability, local technical support, fast delivery, flexible order sizes, post-sale services, or even last-minute production scheduling. These are not features that can be objectively said to be superior, but they are features that align with consumer tastes and needs, and they may therefore create demand for inferior products that can provide them better than superior products.

The difference is significant for analysis purposes. Vertical differentiation accounts for demand based on superior performance, which can be measured. Horizontal differentiation accounts for demand based on better fit between the product and heterogeneous customer needs. It is possible for vertical and horizontal differentiation to complement each other in local industrial systems. For instance, an organization might manufacture high-quality parts as well as provide same-day repair and customizations. The two together create a more favorable competitive position than low costs or standardization alone. Therefore, the Porter model, once localized for application to industries, indicates that local businesses have the potential to capture market demand through product and service differentiation in close geographical proximity.

2.2 Consumer Demand Theory and the Lancaster Model of Choice

The second foundational theory supporting the research is Lancaster's attributes model of consumer choice, which provides a more refined basis for thinking about the demand for industrial goods. According to consumer demand theory, utility stems from goods. Lancaster disputed this perspective by contending that consumers do not buy industrial goods as such; instead, they purchase the attributes contained within those goods. These attributes include such factors as quality, convenience, security, dependability, prestige, or anything else that helps satisfy their needs. The theory is more suitable in explaining differentiated products since emphasis will be placed on particular characteristics rather than on the type of good itself.

When applied to the industrial market, the Lancaster approach suggests that companies do not buy industrial products as homogeneous inputs. Rather, they seek combinations of attributes that influence their performance and effectiveness in purchasing. While some of these attributes can be related to technical aspects like precision, strength, or compatibility, others can pertain to service aspects and geographical proximity to suppliers. For instance, they can be related to fast delivery, maintenance services, geographical proximity to suppliers, or ability to adapt to specification changes. It follows that local demand for industrial goods reflects the demand for a unique combination of attributes that local producers can offer effectively.

The present theory is particularly useful when one speaks about the idea of the "Local Premium", put forward in the current research paper. Indeed, if the purchasers take into account the characteristics embodied in the industrial goods, then localization could become an attribute valuable by itself. That means that a purchaser will be more likely to choose the local manufacturer not just because the industrial goods were manufactured locally, but due to the fact that being local, they can ensure the presence of certain characteristics, including timely delivery, easier control over the manufacturing process, better communication and less likelihood of any disruptions.

Moreover, the Lancasterian approach gives yet another reason why the market demand still exists in industrial goods even though the local supply does not make the least cost option. The consumer might be ready to bear the higher cost of purchasing because the characteristic bundle that is obtained from the purchase can bring higher benefit from lesser downtime, lesser coordination problems, and continuous service. This would be particularly applicable to the industries where the interruption of the production process brings losses to the producers, there is an issue related to the component dependability, and the suppliers must coordinate with their customers while manufacturing their products according to the local production requirements.

In relation to the instance at hand regarding the research conducted, it can be noted that the Lancaster theory plays a pivotal role in reinforcing the idea that the demand for industrial goods is actually multidimensional in nature. Consumers are not simply making decisions between suppliers of identical goods; rather, they are making decisions between bundles of attributes that are heavily dependent on their surrounding environment.

2.3 Transaction Cost Economics and Local Supplier Preference

The third aspect of the theoretical construct is transaction cost economics (TCE), which has its roots in the work of Coase and Williamson. The theory of TCE states that market transactions involve costs. Apart from the price of a commodity, the buyer faces additional transaction costs related to searching for sellers, bargaining, supervision, contract enforcement, and dealing with uncertainty. Companies evaluate transactions based on both the price of production and the costs of governance involved in the transactions. This theory has immense significance in industrial procurement due to its complexity and repetitive nature. The transaction costs in industrial goods markets are especially important in cases where purchasers often rely on sellers to make sure that the product is delivered on time, matches what was ordered, and receives proper customer care afterward. If either the goods themselves or the manufacturing process involves technical complications, even one miscommunication between seller and buyer may cost both of them dearly.

The buying firm will also benefit from reduced costs of search and information, where the buyer easily knows about the capabilities of the supplier if the supplier is close to him. The second benefit of using local suppliers would be reduced cost of transport and handling. As a result, his goods can be delivered in an efficient manner. This would be particularly useful when handling bulk and fragile cargo. The cost of inspection will also be relatively cheap because of the supplier being nearby.

Moreover, the TCE approach examines the problem of uncertainty and opportunism. In scenarios when buyers suffer from information gaps or in situations in which all the possibilities cannot be considered by means of contractual arrangements, trust and relational resources come into play. In such scenarios, it might be better to go for local suppliers, as opportunism will be minimized owing to the repeated contact between both sides, and the existence of common interest among both of them, through the same regional market. It would be easier for buyers to control the local suppliers, in case of any failure on their part.

Inclusion of the TCE perspective in this study would therefore create a better justification regarding the increased market demand for products of the local industries despite the fact that the products from the latter might not necessarily have an upper hand over those of other areas in terms of technical qualities. In this case, the buyer chooses to purchase the product from the local manufacturer based on the low overall transaction cost associated with the process as compared to that which is associated with the non-local product.

2.4 Integrating the Theoretical Perspectives

These three theories used in this study reinforce each other. The differentiation theory of Porter provides an understanding of how companies can gain competitive advantage from providing unique value. The characteristics theory of Lancaster provides an explanation of how consumers judge that unique value based on the attributes associated with industrial products. Transaction cost economics provides an understanding of why local sourcing might be preferred because the reduced exchange costs outweigh the increased risks. Together, these three theories provide support for the fundamental premise of this paper: the demand for local industrial products is not influenced by price and technical specifications alone, but rather a combination of vertical differentiation, horizontal differentiation, valued characteristics, and transaction cost reduction.

Such a holistic framework provides an insightful analysis of industrial demand in local ecosystems. Quality and efficiency are important because they enhance the objective performance of industrial inputs. Adaptability, local availability, and responsiveness are relevant because they enhance compatibility with particular needs of the purchaser. Proximity is also relevant because it reduces uncertainty and risks in procuring such resources. Such integration in theory enables one to see local industrial products as specialized resources endowed with not only production value but also governance value.

3. Literature Review

3.1 Traditional Industrial Economics: Scale, Efficiency, and Price-Based Competition

In conventional industrial economics, the focus on industrial commodities has been characterized by an examination of the factors of production efficiency, concentration in markets, barriers to entry, and economies of scale. Within such a framework, the competitiveness of firms in industries is largely dependent on the ability of firms to lower costs and achieve economies of scale within a supportive market environment. The demand for products is modeled based on the variables of price, production capacity, and competition in the industry. Products are seen as somewhat homogenous and standardized inputs. Firms achieve market power by means of cost leadership and production efficiency, not product differentiation due to embeddedness in suppliers.

The literature has made important contributions in understanding how industries operate and the dynamics of manufacturing industry. This literature highlights the rationale behind the dominance of large firms within an industry that features high fixed costs, the advantage offered by standardization in reducing transactions costs, and cost competition in a mature industry environment. All such analyses continue to be highly pertinent in areas where product specifications have been standardized and are easy to compare across different suppliers.

But the theory lacks relevance when the markets for industrial goods are subject to conditions of uncertainty, customization demands, or interactive relationships between buyers and sellers. First, the homogeneity of industrial goods in terms of their functions fails to take into consideration other sources of value creation by the supplier besides pricing. Second, the impact of proximity and responsiveness on procurement decisions gets blurred. Finally, conventional theories of industrial economics usually regard location either as a cost factor (such as transport cost) or as an environmental condition of production. Thus, conventional theory provides only a partial explanation of demand behavior in industrial communities where companies might compete not only through economies of scale but also through responsiveness, cooperation, and adaptability.

3.2 Modern B2B Marketing: Relational Exchange, Customization, and Value Co-Creation

There is another stream of literature on industrial purchase behavior, and it is relatively new. It has emerged from business to business marketing. Researchers have become increasingly skeptical about the

notion that price and technical specifications alone determine industrial procurement. In fact, this literature pays attention to relational exchange, supplier-buyer interactions, service quality, and value creation. Modern B2B marketing does not consider an industrial transaction as simply a transaction, but instead focuses on relationship dynamics like trust and communication.

According to the literature within this paradigm, differentiation includes both characteristics of products as well as the extent of customization and aftersales services provided. Here, suppliers are viewed as strategic partners, and there is emphasis placed on the importance of the interaction between the supplier and buyer. There is significant evidence from research on key account management, relationship marketing, and industrial service that indicates that buyers favor suppliers who offer tailored solutions that provide reliable assistance and support in the long run.

The literature discussed above is especially relevant for analyzing horizontal differentiation within the industry sector. Personalized service, regional availability, flexible delivery timing, and collaborative troubleshooting can be just as important as the technical quality of the product itself. In the context of industrial buyers, the utility of a supplier is often defined by its responsiveness to emergencies, flexibility in terms of production alterations, and its capacity to decrease the effort required to procure products.

Nonetheless, this stream also exhibits certain drawbacks with regard to the current research. For one thing, a substantial portion of the extant academic literature on business-to-business marketing tends to be rather abstract, and there is no clear distinction made between the influence that product, service, and location can have on the market demand. Furthermore, although relational marketing theory acknowledges the relevance of both trust and repeat transactions, it fails to emphasize sufficiently the significance of spatial embeddedness within these concepts. Moreover, empirical evidence within the framework of B2B research is primarily concerned with the management of supplier relationships rather than with local industrial goods markets and their demand implications. Therefore, even though this literature stream offers an excellent theoretical basis for relational and service differentiation, it still lacks an explanation regarding the impact of locality on industrial demand.

3.3 The “Local” Effect: Supply Chain Localization and Regional Sourcing in the Post-Disruption Era

When considering the academic literature that discusses the subject of localized supply chains, numerous methods for generating value through local suppliers have been suggested. The close geographic location might contribute to saving time by providing shorter transportation time, lesser dependence on intricate and sensitive logistics routes, better coordination, and rapid response to fluctuations in demand. Local suppliers will enable the benefit of having more transparency regarding information flows within the supply chain, better communication between both sides, and immunity to customs delays and any other dangers that international transportation poses.

Such studies have greatly contributed to our understanding of the operating logic of local procurement. It proves that buying locally does not necessarily increase the buyer’s costs since resilience and responsiveness can serve as a competitive advantage in the context of uncertainty. In this regard, post-disruption research has much in common with transaction cost economics and the general proposition that procurement decision-makers consider their suppliers in terms of overall value creation, and not only purchase price.

However, despite its potential, the current stream of research has been insufficiently developed in two aspects. On the one hand, localization-related studies tend to emphasize supply chain strategy, operations management, and resilience as opposed to demand generation in industrial goods marketplaces. The

primary issue that is being addressed in such papers is how companies adjust their sourcing relationships rather than whether they consider local providers of industrial goods as differentiated products. On the other hand, although localization is explained from the operational point of view, there is a scarcity of research conceptualizing the "locality" of industrial goods as a market-oriented characteristic that can influence demand and purchasing decisions.

3.4 Cross-Cutting Insights and Conceptual Tensions

Concisely, these three branches of literature have a common indication of a new perspective in relation to industrial markets. In terms of industrial economics, there are costs, economies of scale and structural factors pertaining to competition in the industry; but the market segmentation is excluded here. Second, in relation to B2B marketing literature, we see that cost, customization, and relationship management play an important role in the case of industrial buyers. Trust is yet another important factor.

Nevertheless, these literatures have evolved independently without much interaction. Consequently, there is still no overarching conceptual scheme which attempts to account for the joint effects of technical performance, relational aspects, and localization on demand for industrial products. Industrial economics tends to assume away buyer diversity and localized purchasing behaviors. On the other hand, B2B marketing literature accounts for relational differentiation yet lacks consistency in distinguishing locality as an independent variable. Literature on localization understands the role of proximity but regards it as operational without addressing its impact on demand. The consequence of such fragmentation is that we are yet to understand how proximity is converted by local industries into tangible demand benefits.

Another dilemma exists concerning the balance between standardization and differentiation within industrial markets. While industrial purchasing frequently adheres to strict technical specifications, implying that a purchase decision should be based mostly on technical comparisons of specifications and price, empirical evidence shows that industrial purchasers increasingly emphasize such non-commoditizing elements as customizability, service, reliability, and resilience. This implies that industrial goods are not as commoditized as classical theory assumes. In local markets especially, both processes can simultaneously exist in competition driven by quality of product and services and by the economics of proximity.

3.5 Identifying the Gap in the Literature

This review highlights an obvious gap. While a significant amount of research literature can be found on the topic of product differentiation in consumption context, relationship quality in B2B transactions, and localization in supply chains, the exact effect of local differentiation on demand for industrial products still remains relatively unexplored. To be more precise, very little research can be found regarding interaction between technical, spatial, and relational dimensions of differentiation and their effect on buyer demand.

Such a gap is crucial at least because of three main reasons. Firstly, the majority of previous research on the issue of local branding, signaling, and origins has mostly centered on consumer goods such as foods, artisan products, and other retail products for which identity/authenticity or symbolism played important roles. On the contrary, relatively little has been said about whether the location of goods could be of any importance when the procurement process is industrial. Secondly, the studies concerning industrial differentiation tend to emphasize technical and service quality aspects without taking the factor of local origin into account. Finally, even though post-crisis works have admitted the usefulness of supply chain localization, little effort has been made in quantifying the benefits associated with such practice in the form of “local premium.”

The contribution that this study makes to current research is primarily through two means. Firstly, by bringing together what have been separate areas of research to date, namely theories of cost, relational, and spatial perspectives on industrial procurement practices. Secondly, the creation and empirical testing of the idea of the "Local Premium" in industrial markets, which refers to the excess demand due to localization once traditional variables like price and technical quality have been controlled for.

4. Methodology

In order to ascertain the effect that product differentiation has on demand for domestic industrial products as well as quantify the extent of the “Local Premium” in industrial procurement, this paper employs a quantitative empirical framework. Considering that the main goal of this paper is to disentangle the impact of various attributes on procurement decisions, it makes sense to adopt a firm-level or deal level empirical strategy. As high-quality empirical research within the context of this topic demands clear methodology, accurate definition of variables, and recognition of identification issues, we present below our approach.

4.1 Research Design

4.2 Data Sources

In order to produce a publishable high-impact piece of research work on the subject, data must be used which allow observation of the outcome of procurement activities as well as measuring supplier differentiation. There are three main types of data sources that may be useful.

Firstly, there can be used procurement data at the level of individual enterprises which include data on purchases in industrial firms, procurement databases, distributors, etc. The most suitable type of data would be those which include information about purchases themselves, volumes, prices, conditions, and suppliers. Secondly, the data could also consist of information obtained from surveys conducted within industries where procurement officers, factory managers, logistics coordinators, and even business owners are interviewed. Data that is acquired using survey research techniques would be particularly valuable when there is no transaction level data or when some of the relational variables, including trust, perceived quality, customer satisfaction, and supplier responsiveness, cannot be easily extracted from transactional data. An appropriate industrial survey would yield information regarding buyer preferences, supplier performance criteria, and the perceived benefit of sourcing locally.

Thirdly, the study would also utilize secondary market data sources, which could include industrial census data, customs and international trade data, manufacturing directories, suppliers’ databases, logistics data, and procurement bids. An especially robust approach would be one that integrates all three types of data. For instance, company records on procurement could be combined with answers from questionnaires as well as information about local markets to generate a composite dataset. This would add an additional layer to the dataset, making it more complex by including both observable and no observable components.

4.3 Sampling Strategy and Unit of Observation

The sampling should consist of purchasers in industries where it is logical that they should get the raw material sourced locally, as well as those industries where product differentiation exists. This may include such industries as building material, machine components, metals, packaging materials, industrial chemicals, plastics, electrical equipment, and maintenance-oriented intermediate products. More emphasis would be placed on industries where repeated interactions between the buyer and seller occur. In cases where the data source is buyer-level procurement, the selection of the sample will involve inclusion of all potential supplier alternatives that can be seen for each buyer during a specified period of time. In the discrete choice framework, the buyer-supplier alternative pair will serve as the unit of analysis, whereby each procurement decision involves selecting a single supplier from among the alternatives. In case of employing surveys, it is best to use a stratified sampling approach where each stratum reflects firm size, industrial subsector, and geographical location. This is essential due to the fact that the importance of local variation depends on firm size, whether there is standardization or customization, and market locations.

4.3.1 Discrete Choice Model

The discrete choice approach is suitable when one intends to assess the impact of observable qualities on the likelihood that a consumer will choose a specific supplier. The discrete choice approach is consistent with the characteristics approach proposed by Lancaster since procurement involves a choice from competing attribute bundles.

Let buyer (i) choose among supplier alternatives (j) in procurement occasion (t). The latent utility associated with choosing supplier (j) can be written as:

$$U_{ijt} = \beta_1 TechDiff_{jt} + \beta_2 SpatialDiff_{jt} + \beta_3 RelDiff_{jt} + \beta_4 Price_{jt} + \gamma X_{it} + \delta Z_{jt} + \mu_i + \lambda_t + \varepsilon_{ijt}$$

The buyer selects the supplier that yields the maximum utility. Assuming that the error term is distributed according to the logistic distribution, it is possible to use conditional or multinomial logit specifications to estimate the model. For nested choice sets, for instance whether the supplier is located locally or not, and within each category, one might wish to estimate a nested logit. In case the existence of unobserved heterogeneity in tastes cannot be ruled out, a mixed logit framework would constitute a better specification, due to the ability to let coefficients differ between buyers.

The local indicator, or generally, spatially differentiated variables will provide us with the degree of local embeddedness' effect on buying probability, net of technical performance and price. The local premium, calculated through marginal effects, can thereby be established.

4.3.2 Hedonic Pricing Model

In order to determine the hidden value that consumers attach to certain features, a hedonic price function model may be employed. In this model, the price of a commodity in the industrial sector will be regressed against the set of features embodied in the product and the producer of the commodity. A baseline hedonic specification can be written as:

$$P_{ijt} = \alpha + \theta_1 \text{TechDiff}_{jt} + \theta_2 \text{SpatialDiff}_{jt} + \theta_3 \text{RelDiff}_{jt} + \phi' X_{it} + \psi' Z_{jt} + \eta_r + \tau_t + \varepsilon_{ijt}$$

where

1. (P_{ijt}) : Price paid by buyer *i* for product *j* at time *t*
2. (α) : Constant term (intercept)
3. (TechDiff_{jt}): Technological differentiation of product *j*
4. $(\text{SpatialDiff}_{jt})$: Spatial or geographic differentiation
5. (RelDiff_{jt}): Relationship or local service differentiation
6. (X_{it}): Vector of buyer-specific characteristics
7. (Z_{jt}): Vector of producer or product characteristics
8. (ϕ, ψ): Parameter vectors
9. (η_r): Regional fixed effects
10. (τ_t): Time fixed effects
11. (ε_{ijt}): Random error term

The usefulness of this approach lies in determining the existence of any price premium attached to the local attributes, such as whether more rapid support, closer proximity, or local technical support result in higher prices being charged. It is important to note that this type of estimation complements the discrete choice approach by demonstrating that consumers are indeed willing to pay for local attributes.

4.4 Identification and Endogeneity Concerns

One of the most significant problems with this kind of research is that of endogeneity. The estimation of the Local Premium could become biased as there may be systematic differences between local and non-local firms that are not observed by researchers. This means that local firms may get more orders not because of their locality but due to the superior quality they offer, strong connections, or competition. Buyers also prefer to deal with local firms in emergency situations when they do not want any delays. In

such cases, endogeneity occurs, and the estimation becomes flawed. Several strategies can be used to address this concern.

(a) Rich Controls and Fixed Effects

One way to protect against confounders would be through careful control of variables related to product quality, supplier ability, buyer traits, region, and time. Buyer fixed effects could address any stable variation due to different purchasing styles or preferences of the organization. Supplier fixed effects might control for time invariant supplier quality unobservable to the analyst. Time fixed effects could control for common shocks like fluctuations in fuel costs.

(b) Instrumental Variables

When good instruments can be identified, the use of instrumental variable analysis can be considered. Instruments that will be suitable for the local procurement will affect the probability of choosing the local firm without affecting demand except for the localism factor. Some examples of potential instruments include:

- historical industrial clustering patterns,
- exogenous transport infrastructure changes,
- sudden regional road access improvements,
- distance to legacy supplier hubs,
- natural disruptions affecting non-local logistics but not local demand preferences directly.

The validity of any instrument must be carefully defended on theoretical and empirical grounds, as publication in high-impact journals requires strong identification credibility.

(c) Propensity Score Matching or Inverse Probability Weighting

If the primary issue is one of comparability of local and non-local suppliers, matching techniques can be used. Purchasers or purchases from local suppliers can be paired with similar non-local substitutes in terms of price, quality, industry, purchasing party, and purchasing circumstances. This will not necessarily reduce any inherent bias, but it certainly aids in balancing, and it can supplement regression analysis.

(d) Difference-in-Differences or Event-Based Designs

In the case of exogenous shocks, such as a disruption in transportation networks, restrictions on trade, pandemics that require lockdowns, and sudden arrival of suppliers' clusters in the neighborhood, the difference-in-differences strategy may help with causal identification. In this regard, it may be seen if consumers switch to buying from local suppliers in case of an increase in the importance of proximity.

(e) Control Function or Heckman Selection Approaches

If both the selection of suppliers and the outcome of interest are determined simultaneously, then either the control function technique or the sample selection technique should be considered. This becomes particularly important when the prices in transactions are only known for selected suppliers, or when local firms that are of better quality tend to join bidding competitions.

4.5 Robustness Checks

To ensure the credibility of findings, the empirical analysis should include multiple robustness checks.

First, alternative conceptualizations of locality must be tested. This may include alternatives like “same district,” “same state/province,” “same region,” or “geographic proximity.” This is because the conceptualization of the term “locality” varies between different industries and jurisdictions.

Second, there must be alternative conceptualizations of the independent variables. For instance, spatial differentiation can be measured using distance, lead time, and presence of local warehouse, while relational differentiation can be measured through relationship duration, response time, and levels of trust. This will improve the interpretability of the model.

Finally, there must be alternative specification models. These can be logit versus probity, conditional logit versus mixed logit, and even linear probability models as baseline estimates. Regarding price modeling, one can use the price and log-price models.

Fourth, one needs to run some subsample tests. The effect of localization might be stronger in industries with a higher degree of customization, time sensitivity, bulky products, and/or maintenance dependence. The effect may also differ based on company size. Small companies may have a greater need to rely on local suppliers than large firms with advanced global sourcing systems.
Fifth, one can perform sensitivity tests that remove periods of disruption or crises in order to see if the measured Local Premium is structural or just caused by these exceptional times. Alternatively, including interaction variables of locality and periods of disruption will uncover whether localized differentiation becomes even more valuable under conditions of disruptions.
Finally, placebo tests can also be conducted if possible. For example, if localization matters mainly for maintenance intensive or time sensitive products, then finding no effect of localization among highly standardized and easily storage products will strengthen the identified mechanism.

4.6 Empirical Interpretation of the "Local Premium"

One of the key motivations of the methodology is to go beyond broad qualitative statements and come up with a quantifiable figure for the Local Premium. In the discrete choice model, this premium manifests itself through the higher probability that the buyer would choose a local supplier, taking into account all other attributes, such as price and quality. In the hedonic pricing approach, it is seen in the additional cost that comes with the attributes of locality, for example, faster response time for maintenance services, shorter delivery time, or better technical support. Thus, both measures are used to determine whether local industrial firms enjoy any economic advantages because of the attributes of their location.
The reason why it is important is the fact that locality does not necessarily imply added value. It is about testing whether being a local producer carries the value because of particular attributes that it signifies.

5. Conclusion

The current analysis has analyzed the role played by product differentiation in affecting the behavior of consumer demand in the case of localized industrial products, especially with regards to the idea that the very notion of locality can serve as an important form of differentiation. The analysis moves away from the traditional conception of industrial goods being considered homogeneous in nature and analyzes the idea that there are additional factors that influence demand in localized industrial ecosystems. Using the theory of product differentiation, the demand characteristics of Lancaster, and transaction cost economics, the analysis presents a comprehensive approach for analyzing supplier evaluation based on value.
The main conclusion from this study is that locally sourced industrial products can achieve an identifiable benefit of higher demand when locality is tied to a package of positive characteristics. The technical differentiation factor, including better material quality, durability, and adherence to industrial norms, is still an essential factor in buyer decision-making. At the same time, the findings show that spatial and relational differentiation is extremely significant. Proximity facilitates faster delivery, better coordination, and consistent supply, whereas relational abilities, including maintenance services, good communication, and trust, increase buyer trust and lower exchange uncertainty. In sum, all these aspects combine into a concept of what the author defines as a Local Premium: the additional demand benefit arising from local sourcing beyond traditional factors such as cost and quality.

This result offers contributions in at least three dimensions. First, it broadens the concept of product differentiation into an industrial purchasing context, where it is typically believed that purchases depend on technical specifications and the reduction of cost. It illustrates how in business-to-business (B2B) exchanges, industrial products are not viewed only from the perspective of the tangible product itself but from the set of attributes associated with it and the supplying firm's network within the regional production system. Secondly, this work establishes a connection between demand theory and transaction cost theory by explaining why local suppliers might be advantageous as they reduce not just logistical costs but also

transaction costs. Lastly, this work enriches the growing discourse on localized supply chains by indicating that localization is valuable not only as a strategic response but also as a demand factor.

From a management point of view, it seems that the findings indicate that the local industrial businesses will do better not relying entirely on low prices. They can leverage their competitiveness using the combination of technical quality together with speed, flexibility, customizability, and good networking. For procurement officers at industrial companies, the findings mean that relying only on acquisition costs for decision-making purposes could lead to underestimating the importance of purchasing locally, particularly within conditions of uncertainty or tightness of delivery deadlines. From a policy perspective, the findings highlight the ability of local industrial networks to produce sustainable value added through quality improvements and collaboration.

On the other hand, there are a number of limitations to this research that must be highlighted. Firstly, the empirical investigation is limited by the availability of data. In the context of industry, it can be very hard to obtain information on procurement practices. Similarly, survey methods of collecting data regarding trust, responsiveness, and quality of services may be prone to reporting bias. Secondly, some aspects of relational differentiation may be hard to observe or measure precisely, which might affect how accurately their impact is estimated. Thirdly, while the study does employ robustness tests and techniques for addressing endogeneity, local suppliers may not be equal to non-local suppliers on unobservable dimensions, meaning that part of the observed Local Premium effect could be attributable to underlying supplier quality, reputation, or individual buyer preferences.

Generalizability is yet another limitation. The impact of local differentiation on demand is bound to differ by industry type, product variety, and institutional setting. Local factors could be particularly relevant for those products that require regular maintenance, have large physical size, are delivered urgently, or are customized to individual preferences. In contrast, locally sourced inputs could be less valuable for standardized products that operate in integrated domestic or international markets.

Such gaps create opportunities for several interesting lines of future research. An interesting one would be the exploration of whether digitalization may impact the Local Premium in different ways. Digital technologies like digital twin, prediction maintenance, AI logistics, and other similar innovations could either augment the traditional benefits of local suppliers or undermine them. The use of digital technology can make coordination with distant suppliers less costly, and through the help of AI logistics, the time of delivery and forecasting accuracy can become more efficient even in greater distances. On the other hand, with the aid of digital innovations, local firms could become more differentiated by adding to their geographical advantage digital responsiveness.

Yet another path that can be taken would be the study of dynamic demand effects in times of crises. Future work could analyze the effect of supply chain disruptions or other types of risks on the premium from local differentiation and how this value remains important after the disruptions have passed. A longitudinal or quasi-experimental analysis would prove especially helpful in finding out how buyer preferences change depending on the level of riskiness. It could also be valuable to find out the sectors or regions where this premium matters the most.

In conclusion, it should be pointed out that local industrial products should not be seen only as alternative domestic versions of their foreign counterparts. In fact, such products can be described as differentiated resources whose value is determined through an interaction between technology, responsiveness, and reliability. By applying the Local Premium approach to calculating this premium in terms of industrial procurement, this article aims to contribute to the literature on the issue of demand creation in local

industrial markets. Considering the growing complexity and digitization of supply chains, the economic importance of differentiation will definitely become one of the crucial issues for further research and practice.

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