Contributions to the formation of export prices and the development of skills of the logistics professional.

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ABSTRACT: Globalization has allowed the reduction of spatial and border limits between nations. Stimulating the development of competition in the international market scenario. Making it necessary and vital for companies to know the processes involved in an international logistics operation. Additionally, companies must map and optimize their processes, aiming at maintaining quality and lower costs, in order to achieve greater competitive power in the face of international competition. Thus, the formation of export prices presents itself as an important skill to be developed by the professional working in international logistics. Demanding knowledge of the variables that form the costs and prices practiced in the import and export processes and the mastery of the logistics activities involved. In this article, conceptual models and mathematical formulations for obtaining international prices were developed, thus highlighting the importance of developing the skills of logistics professionals, who are intrinsically involved in such processes.

Keywords: Formation of export prices. Global supplies. Formation of costs and prices. International logistics. Logistics professional. Logistic skills.

I. INTRODUCTION

Logistics has become a key factor for increasing and maintaining the power of competitiveness, as well as becoming the integral differential of the strategies implemented by organizations, both at the national and international levels.

In fact, the search for efficiency through the application of techniques, operations strategies and international logistics - with an emphasis on cost reduction and quality improvement - has been demanding from companies and involving several aspects, such as:

- Brand strengthening;
- Increase and stability of market share;
- Loyalty and commercial partnership;
- Financial stability;
- Constant profitability.

With the complexity of forming export prices, most companies are overloaded with information, being aware of the impact of price decisions on their prosperity and growth.

Various services are provided to support the purchase and sale of goods, within the scope of the domestic market and for the global market. Among these services, those associated with product transportation stand out, in the various types of modes (road, rail, pipeline, waterway, airway) and in customs clearance operations (land borders, airports and ports), whether in an intermodality environment (as in Brazil) or multimodality (in developed countries). They involve the handling of various packages, such as sea and air containers, pallets, crates, boxes and bags, as well as storage and guard activities, and contracting national and international insurance. All of these aspects and characteristics are strategic factors for the success of any company's foreign trade policy.

According to Dua & Sinha (2019). Processes and Documentation are important components in a multimodal supply chain. In fact, especially in international business, the number of documents and the complexity of the processes are significant. This complexity affects the performance of a multimodal chain. The players, active in the international scenario, argue that the results of the performance of supply chains are affected by the bureaucratic system, lack of standardization and low skills of service providers in

mattersrelatedtotheexecutionanddocumentationof processes.

Iftheproductionprocessisrelativelyflexible, withproducersmixing inputs basedonpricesignals, the global trading system canbeconsideredtoinvolve "task" trading, withevery bit ofthe global valuechainbeingsemi-autonomous. If, ontheotherhand, thesevaluechains are relativelyinflexible, sothatgoods are combined in a relativelyfixedproportionwith a limitedpriceaccount, then trade isbestseen as involving "Goods" withthevariouspartiesglobalvaluechaincombinedtoc reateasingleproduct,implyingmuchgreaterinterdepe ndenciesacrossthechain. (BAYOUMI, 2019).

The global economyis in themidstof major upheavalsthataffectthe global supplychainstrategy in allsectors. Today, companies face enormouspressuretorestructure, redesignandrethinkwhereandhowproducts are produced, inputs are purchasedandcustomerdemandis met. The determinantsofthischange include allthe usual factors, such as marketvolatility, costdifferentialsandinterruptionoftechnology. (MORRIS and HAU, 2020).

The objective, as in allsupplychains, isto match supplywithdemand, buton a global scale. Thisisachievedthrough ahierarchyofdecisionsthatdetermineflows,productiv eandmaterialcapacitiesateachmanufacturingandstor agelocation, as well as cash flows, costsallocatedtoflowsandinvestments in technology. (MORRIS and HAU, 2020).

Currently,supplychainsareincreasinglydependenton informationsharing,madepossiblebytheautomations andtechnologiesthathaverecentlyemergedand are shapingcompaniessupplychain models (KACHE and SEURING, 2017).

Atthesametime,informationsharingimpliesamoreco nsiderableexposureofsupplychainstovarioustypesofr iskscalled "informationrisks" (RAJAGOPAL et AL., 2017).

In addition, there are uncertaintiesaboutgovernment policies thataffectinternational trade and local processes. Thishasledtothecurrentsituation in whichwe are facing a trade war, withgovernmentsseekingtooptimizethedomesticpart ofthesupplychainsthatoperate in theirjurisdiction. At thesame time, escorts are strivingtooptimizetheirspecific global supplychainsthatoperate in multiple jurisdictions andthatgenerateextensivecross-borderflowsofgoods, money, informationandcontrol. (MORRIS and HAU, 2020).

Thereis no doubtthatcompanieswith global supplychainshaveadvantages. Companieswith global supplychains are exposedtomanyofthesamerisks as companiesthatoperatelocally. However, companieswith global supplychains are exposedtoriskswithgreaterconsequences.

Duetothevarious links in the network andthecomplexityof global supplychains, thecompany faces more risks. Thus, it appearsthat global supplychainshaveincreaseduncertainty, decreasedtransparencyandvisibility.

For Berg (2015). The contract for theinternationalsaleofgoodsbetweenthebuyer (for example, consignee) andtheseller (for example, sender) includes anIncotermrulethatclearlyindicatestothebuyerandsel lerthetasks, costsandrisksassociatedwithtransportationand delivery ofgoods in the container. As a result, oneofthesetwopartiesisresponsible for organizing container shipping.

Accordingto Morris andHau (2020), there are restrictionsimposedbygovernment policies in each country ofoperation. Whilemanyobjectivefunctionscanbeformulated for theproblemof global supplychainstrategy (for example, maximizing global profitaftertax, maximizingcorporatemarketvalue, increasinggrowth, etc.), mostlargecompaniesalsorecognizethattheir global supplychainscanacttomitigatethemanyrisksthey face whenoperatingglobally. Theserisks include exchange rate fluctuations, marketdemandandpricevolatility, uncertainties in trade policies anddecisionsmadebythecompetition.

The degreeof global competitiveness – mostly achieved by scale production and distribution andtheconceptofmarketexpansion - allowsthesearch for marketsthatdemandlower-costproducts, whichadditionallyvalue:
- The qualityrequestedbythebuyer;
- Competitiveprices;
- Delivery conditions in thenegotiation;
- Compliancewithagreed deadlines;
- Commitmentto delivery attheagreedlocation, appointed in thenegotiation.

Accordingto Morris andHau (2020).Thesedecisionsjointly determine theinitialcost for eachcustomer'sproduct / destinationcombination, as well as the total costofownership, which are essential for customeracceptanceandmarketshare. The compensationsthat must beconsidered include allfixedandvariablecosts, therevenuesthatgenerate overall profitafter taxes, as well as

metricsrelatedtocustomersatisfaction, serviceandcompetitive position.

So,themainobjectiveofthisarticleistocharacterizetheimportanceofthelogisticsprofessionalintheformationofinternationalpricesand, mainly, in theidentificationanddeterminationof a conceptual model for theformationofinternationalprices.

The presentedresearch makes useofthequalitative approach, as for theendsisofexploratorycharacterand, as for themeans, thestudyisbasedonbibliographicresearch. Thisworkisstructured in two more Sections: in Section 2.thereisthetheoreticalfoundation, withpresentationanddevelopmentof conceptual models, as well as, in its subsection 2.1. it developstheformulationofmathematicalequations for theformationofinternationalprices, thusallowingthebasisoftheconclusionsofthisresearch , and, in Section 3., are theconclusionsofthearticle, followedbythebibliographicreferencesused for theelaborationofthetext.

II. THEORETICAL FOUNDATION

Priceformationisoneofthemostimportant skills requiredoftheLogistics professional, as theyconstituteand define thecostsandpricestobepracticed in internationalnegotiations. Therefore, it isofparamountimportancethattheLogistics professional knowstheentirestructureandallthe processes involved in thecompositionandformationofcoststhatmayimpacttthepricestobecharged.

Exportpricestendedtoincrease in importance, for severalreasons, such as: saturationofmarkets; financials crises; anddifficulty in increasingtheirdemands, ifthey do notactively use prices as a tool toincreasetheircompetitivepower.

It shouldalsobenotedthattheinformationtechnologiesattributedtoIndustry 4.0, accordingto Barreto et al (2017), willbeusedto lead togreater business transparency, making it more difficult for companiestoestablishandmaintainpricedifferencesbetweenmarkets. The consequenceoftheoccurrenceofthisscenario, withthereductionofretailpricesandtheshorteningofproductlifecycles, willbetheincrease in pressure for more sophisticatedpricingpractices, withfasterreturn times.

Accordingto IDB (Inter-AmericanDevelopment Bank) and WEF (World Economic Forum), (2019). Amongthemostimportantobstaclesonthe path tosupplychain 4.0 are thelackof a clear business case, limitedaccesstohuman capital, the disparate natureoftechnologies (prematureobsolescence, limitedinteroperability), internalorganizationalbarriers (silos, fearofexperimentation)), limitedavailabilityoftransportinfrastructure (fromroadstoportsandtelecommunications), lowefficiencyoftransportservices (duetohighlyfragmented sector organization), delayedinformation systems at gateways andbordersandcomplicatedtaxschemesand business regulations

To face thesechallenges, amongthe skills requiredofLogisticsprofessionals, in additiontotechnical skills, said professional must have transversal skills, such as:
- Speed ofreasoning;
- Perception for changingScenarios;
- Act in multipleanddifferentscenarios;
- Adaptability;
- Emotionalstability in the face ofcrisisscenarios;
- Ethicaland moral values;
- Update on new technologies;
- Leadership;
- Proactivity.

FortheteamworkinginLogistics,knowledge anddefinitionoftheentireproducttransportprocesswillbeessential, from its originatthefactory, throughtranshipmentterminals, warehousesandvehicles, tothelocationdesignated for thetransferofownershiptothecustomer. Errorsorunidentifiedcostsmay cause negative impactswithmeasurementoflossestotheoperation, and, in some situations, cause the business tobeunfeasible.

Thus, thereis a needtoadoptlogisticsactivitieswith high levelsofefficiencyatinternationallevels, seekingthe use ofinternational multimodal transportsuitable for integration in a global supplychain. Therefore, it isextremelyimportanttohave prior planning for eachlogisticsoperationandinternationaloperations, takingintoaccountallthecharacteristicaspectsoftheproductionchain, observingtheinterestsofthe stakeholders involved.

Dua&Sinha (2018).Note thatthequalityof multimodal logistics, togetherwithproductofferings, determines thecompetitivenessofproducts in global markets. Corroboratingthis, it isknownthat, in developing countries, thelogisticscostcanconstituteabout 40% ofthe total landed cost. Thus, amongotheraspects, companiesneedto monitor thequalityoftransport (multimodal) andthecostof delivery.

Thereareseverallogisticsfactorsthatcanleadtothesuccessorfailureofcommercialtransactionsbetweenexportersandimporters.

Payattentiontotheimportanceofcontrollingandminimizingthe time involved in theoperationsoftheinternationallogistics system, whichinfluencetheformationof stocks, incorporatingadditionalcosts, reducingthedesiredprofitability, andmayeven make trading impossible. Specialattention must begiventotheinfluenceoftheactionsandrequirements ofpublicinstitutionsthatwork in customs, linkedtoforeign trade processes, with a direct impactonthe time ofdispatchofexportandimport cargo.

Fundamental, too, isinformationaboutconsumermarkets, such as: cultural, religiousandpoliticalhabits, orbuyinghabits, integrationofthesupplyanddistributionchainorseasonalperiodsofconsumption.

Suchinformationallowstobeobserved, for example, whichproducts, marketsand times are interesting for salesnegotiations, shippingandmaintenanceof stocks for consumptionor for carrying out contingencies, allowingbetterqualityandlowercosts for commercialization.

In the case of global operations, thereis still a greatexpectationwhenrelatedtocustomsclearance, whichdependingonthecharacteristicsoftheproduct, theproducing country andthe country ofdestination, maysufferseveralimpositionswithreferencetomarket, phytosanitaryorotherprotectionism,whichcreatestariffor non-tariffbarriers, imposing release times beyondnormality, whichconsequentlywillresult in costincreases, andmayeven make their release unfeasible.

It isincreasinglyimperativetoseekefficiency in processes, sincethecompetitivenessfactor, throughtheobservationoftheprice / quality binomial, hasbecomethemost cruel ofthevariablestoremainactive in themarket. ThissituationhasforcedtheLogistics professional toacquirethenecessary skills toidentifythecostvariablesthatinfluencethepricecomposition, orthedesiredprofitability. It isimportanttoidentifythesevariablesand take careoftheiradequatecontrolsothatthey do not interfere withtheprogressionofstrategies for attracting new customers, for thegrowthormarketmaintenanceoftheorganization.

A companytendstoselect a pricethat improves its profit, and for DuaandSinha (2018), thepriceofproductsdependsoninternalandexternalfactors. Internalfactors include marketing objectives, marketing strategyandcosts; whileexternalfactorsinclude elasticityofdemand, customerexpectations, competitiveproductsandgovernmentregulations. In

thedomesticmarket, thepriceabovethe marginal costisguidedbythecompany'smonopolypower for a givenproduct, whichisachievedthroughtheproduct'sdifferentiationstrategyand its preference for consumers. In the case ofinternational trade, thecostofLogistics plays animportant role in thepricingofgoodsandtheextentof its impact varies dependingonthedifferencebetweenthegoodstraded.

Incoterms, short for International Trade Terms, werecreatedby CCI, theInternational Chamber ofCommerce in 1936 withtheintentionofstandardizingtheinternationalcommerciallanguage, withregardtotheobligationsofthebuyer / importerandtheseller / exporterwithregardtotheplaceof delivery andthecostsassociatedwitheach term. Incoterms are ofparamountimportance for thedevelopmentofinternationaloperations, sincewhendeterminingresponsibilities, theyestablishunderstandingsanddiluteddoubtsthatmaybequestionedorinterpretedindividuallybyoneofthecontractors.

Therefore, it isunderstoodthatboththesellerandthebuyerneedtopayattentiontothetermsofIncoterms, mentioned as partofthesalescontract; thus, in theeventthatinternational trade termsplace a greaterobligationontheseller, thesellerwillhaveto charge more to cover theadded cost. In theeventofan eventual error, it meansthattheseller must cover suchsurpluses, consequentlyreducinghisownprofits, andhemay render unfeasibleorlose a salebypricing a high saleoffer.

Dua&Sinha (2018).Highlightthatthedoor-to-doorservicerequired a changefrom common Incoterms, such as free-on-board (FOB) andcost-insurance-freight (CIF), for on-site delivery (DAP) and delivery withpaymentpaid (DDP), respectively. In this case, salespeopleshouldplantodelivertheproductfromendtoendinsteadoffocusingonthedoor-to-doorpartofthe delivery process. Thisinvolvesplanning multimodal logisticsthat includes multiplemodesoftransport, multiple nodes (terminals) andmultiple stakeholders.

There are Terms, fromspecificIncoterms, usedonly for themovementoftheproductbywaterwayandotherterms for transportationbyvariousmodes. Note thatanIncoterm'sincompatibilitywith a modeoftransportwillnegatetheintendedagreement, andsuchanerrorwill cause difficulties for thecarrier, theinsurerandtheimporter.

Dependingonthe modal selected, additionalpackagingmaybenecessary, andsuchcosts, normallynotexpectedwithairorroadfreight, becomeroutinewith non-containerized sea freight. The variouscompensationswithinthetransportpotentiallyinvolvethechoiceofthe modal, determiningthechoiceofIncoterm, and, dependingonwhich are thebesttransportarrangements, they help in theselectionofcarrierandconsolidationoptionsthat, potentially, cancompensatethe time spent in these. operations.

The costoftransportationmayinvolveseveralcarriers, as in the case ofoceanshipping, which, dependingontheIncotermselected, may include theloadingof containers, theinternaltransportofthesupplierto a port, thetransportfromthesourceoftheporttotheport, andlandtransport, fromthedestinationporttotheplacedeclaredbythebuyer. Alsoincluded in thecostoftransportation are thevariousancillaryfees, which are notlimitedtoexchangeadjustmentfactors, fueladjustmentfactors, terminal feesattheportofloading, terminal charges attheportofarrival, andforwarding charges.

Withregardtotheformationofpricespracticedattheinternationallevel, it shouldbenotedthatthey are constitutedbycostsaddedtotheoperationalandadministrativeprocedures, determinedaccordingtothepurchaseandsalemodality agreed in accordancewiththeInternational Trade Terms - Incoterms 2020 v (CCI - International Chamber ofCommerce) appliedtoeachnegotiation.

The formationofexportprices, in essence, isbasedonthestructureofIncoterms - International Trade Terms - andthe HS - Harmonized System - ofTaxDesignation, which, in theBrazilian case, isexpandedbytheadoptionofthe NCM - Common Nomenclature Mercosur. For thisreason, it isofutmostimportancetoknowthevariablesinvolved in thecompositionofcostsrelatedtoeachproductandeach Incoterm, andconsequentlywhichistheplacenamed for thetransferofownership.

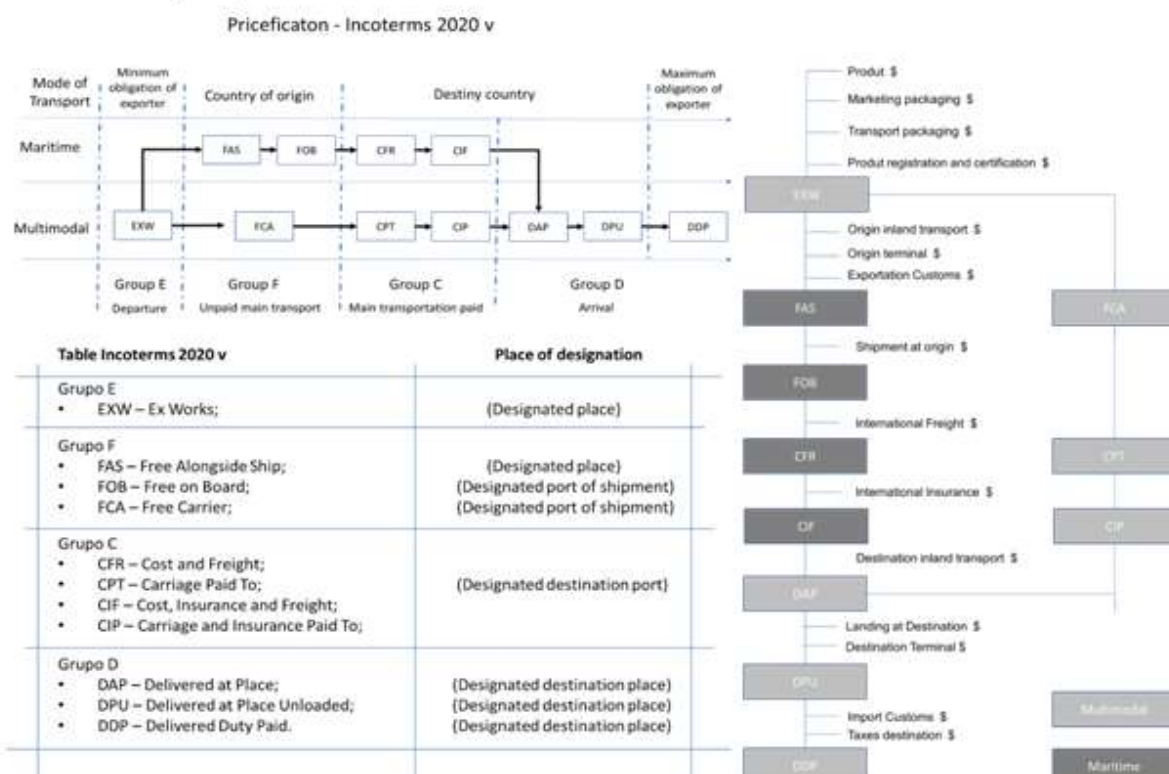They are in version 2020, with 11 Incotermsrepresentedbythreeletters, as shown in Figure 1 andexplainedbelow.

Figure 1 – Conceptual Model andStructureofExportPrice Formation
Source: authors (2020)

Incoterms are notmandatory, however, fromthemomentthey are mentioned in thedocuments, theyhave legal force. They alsoundergoananalysistoconfirm, define

andadapttheirtermsevery 10 years, thusallowingthemtobeupdatedandintegratedwiththe needsofthemarket.

As described in Figure 1, Incoterms observe in theirstructure, aspectsofrisksandcostsassociatedwitheachoftheterms, as presentedandhaverulesdefined as follows:

1st. EXW Term - Ex Works - Thisterm determines theminimumobligation for theseller / exporter. It means: At Origin - Namedplaceof delivery - Seller's Establishment.

Thus, theSeller / Exporterterminateshisobligations, whendeliveringthe cargo tohispremisesorto a locationindicatedbyhim, notcleared for exportandnotloaded in thetransportvehicle. Althoughtheaforementionedterm determines thattheseller / exporterisnotresponsible for loadingthe cargo in thetransportingvehicle, he / she must deliverthe cargo readyand in shippingconditions, accordingtothepurchaseandsaleagreement.

2nd. Term FAS - FreeAlongsideShip - Thistermis for exclusive use in watertransport. It means: Freebesidetheship - Namedportofshipment.

Thus, theSeller / Exporterends its obligationswhendeliveringthe cargo atthenamedportofshipment, ontheside, nexttothenamedShipandalreadycleared for export.

3rd. FOB Term - Freeon Board - Thistermis for exclusive use in watertransport. It means: Freeon Board - NamedPortofShipment.

Thus, theSeller / Exporterends its obligationsbydeliveringthe cargo stowedinsidethenamedShip, atthenamedportofshipmentandalreadycleared for export.

4th. Term FCA - Free Carrier - Thistermis for multimodal use. It means: Freeat Carrier - NamedPlaceof Delivery.

Thus, theSeller / Exporterterminates its obligationsbydeliveringthe cargo, alreadycleared, tothelocationdesignated in the country oforigin, undertheresponsibilityoftheinternationalcarrieroran otherpersonappointedbythebuyer / importer, toproceedwiththeboardingofthetransportvehicle. International.

5th. CFR Term - CostFreight - Thistermis for exclusive use in watertransport. It means: CostandFreight - PortofDestinationNamed.

Thus, theSeller / Exporterends its obligationsbydeliveringthe cargo stowedinsidethenamedShip, atthenamedportofshipment, beingunder its responsibilitythecontractingofinternationalfreightwi ththeshippingcompany, as wellsuch as exportclearance.

6th. CPT term - CarriagePaidTo - Thistermis for multimodal use. It means: PaidTransportationto - NamedPlaceofDestination.

Thus, theSeller / Exporterterminates its obligationsbydeliveringthe cargo, alreadycleared, tothelocationdesignated in the country oforigin, undertheresponsibilityoftheinternationalcarrieroran otherpersonappointedbythebuyer / importer, toproceedwiththeboardingofthetransportvehicle. internationalfreight, beingresponsible for thecontractingofinternationalfreightfromthe Carrier tothenameddestination.

7th. CIF Term - Cost, InsuranceandFreight - Thistermis for exclusive use in watertransport. It means: Cost, InsuranceandShipping - NamedDestination Port.

Thus, theSeller / Exporterterminates its obligationswhendeliveringthestowed cargo insidethenamedShip, atthenamedportofshipment, beingundertheresponsibilityofcontractinginternatio nalfreightwithshippingcompany, as well as insuranceandclearance for export.

8th. Term CIP - CarriagePaidTo - Thistermis for multimodal use. It means: TransportandInsurancepaidupto - NamedPlaceofDestination.

Thus, theSeller / Exporterterminates its obligationsbydeliveringthe cargo, alreadycleared, tothelocationdesignated in the country oforigin, undertheresponsibilityoftheinternationalcarrieroran otherpersonappointedbythebuyer / importer, toproceedwiththeboardingofthetransportvehicle. international, beingresponsible for contractinginternationalfreightwiththe Carrier, as well as insurancewiththeInsurer, uptothenameddestination.

9th. Term DAP - DeliveredatPlace - Thistermis for multimodal use. It means: DeliveredtoNamedDestination - LocationtoNamedDestination.

Thus, theSeller / Exporterterminates its obligationswhendeliveringthe cargo tothebuyer / importer's establishment, orat a locationappointedbyhim, notunloadedfromthetransportvehicleandnotcleared for import.

10th. DPU Term - DeliveredatPlaceUnloaded - Thistermis for multimodal use. It means: DeliveredatLandedDestination - PlaceatLandedDestination.

Thus, theSeller / Exporterterminates its obligationsbydeliveringthe cargo unloadedatthebuyer / importer's establishment, orat a locationnamedbyhimandnotcleared for import.

11th. DDP Term - DeliveredDutyPaid - Thisterm determines themaximumobligation for theseller /

exporter. It means: DeliveredwithPaidRights - LocationatNamedDestination.

Thus, theSeller / Exporterterminates its obligationsbydeliveringthebaggagetothebuyer / importer's establishment, orat a locationnamedbyhim, alreadyclearedfor import. Where theseller / exporter does nothavethe legal conditionstocarry out importcustomsclearance, heisunableto use thatterm in salesnegotiations for Braziliancompanies.

The importancethatcompaniesattachtotheformationofint ernationalprices, help tojustifysystematic approaches relatedtosuchformation. Factorssuch as thestrategicpricingpolicyofcompanies, ortheinternationalcommercialexperience, informationcollectedfromdistributors / suppliersandtheirownsales force, allowcompaniestoorientthemselveson making pricedecisions. Thus, at its base, no technicalortechnological position for such a decisionisenvisaged. In thenextsection, mathematical models are presentedtocollaborateonthisproblemofdecidingwhi chIncotermwouldbemostinteresting for a givensituation.

2.1. FORMULATION OF EQUATIONS IN THE FORMATION OF EXPORT PRICES

In thecomposition for theformationofprices, there are some models that, for themostpart, are complementary. In Figure 2., analternativemathematical model for theformationofexportpricesispresented.

The models for pricing are stronglybasedontheadoptionof Incoterms. However, it shouldbenotedthattheadoptionofIncotermsisnotman datory, thatis, dealers, whetherthebuyerorseller, canpracticeothertermsofsale, butsuchconditions must havetheirformalizationsupportedbycontractslegally acceptedbythedealers.

For thedevelopmentofthedecisionsupport model, onwhichIncotermtochoose, the Mark-up methodwasused for its constitution, as it isunderstoodthatthismethodis more effective. Thisflexibilityisparticularlyattractive in environmentswhen it isdesiredtoinferthe complete distributionofthe mark-up betweencompaniesandproducts over time in differentmanufacturingsectors.

Withtheobservedprices, onecandirectlyrecoverthe marginal costsofthe mark-up estimates. (LOECKER et AL, 2016).
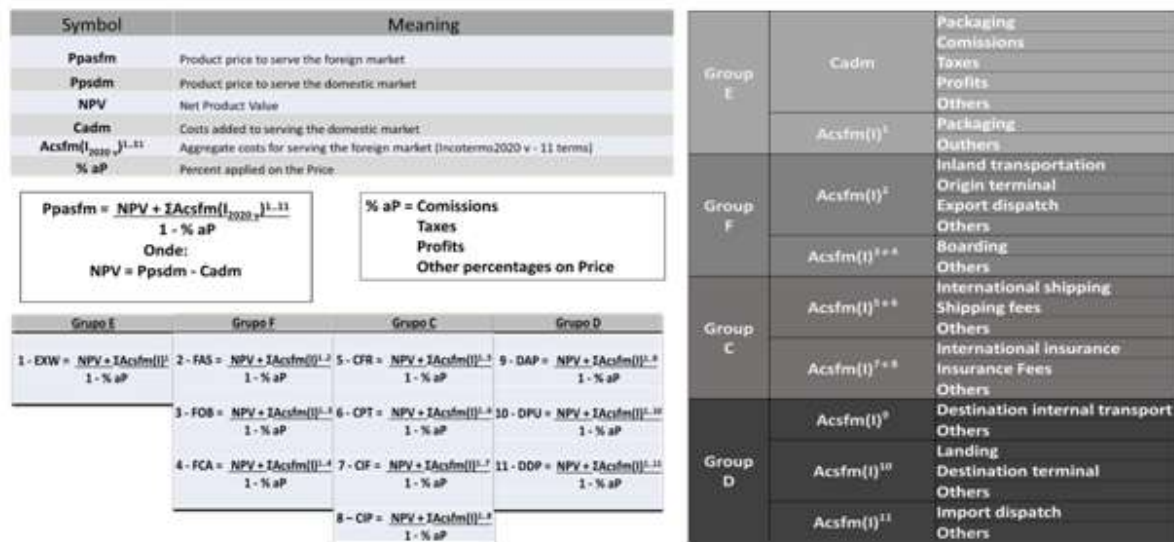
Figure 2 –Mathematical Model for Export Price Formation

Source: authors (2020)

The NPV - Net valueoftheproduct, includes themischaracterizationofthenationalproduct, constitutingorcharacterizing it in a productadaptedtothedemandinginternationalmarket. As shown in Figure 2., thevariablesthat make upthepricesoftheproduct in servingthedomesticmarket are excluded, considering its net valueandadding, shortlythereafter, thevariablesthat make

upthepricestomeetthenegotiateddemand in theinternationalmarket.

In Figure 2, themathematical model, presents a derivationofformulasequatedaccordingtoeachnegotiatedterm, however, the formula wasidealized as a genericformoftheexportpriceformationequation, as explainedbelow:

$$Ppasfm(I)^{1..11} = \frac{(Ppsdm - Cadm) + \Sigma Acsfm(I)^{1..11}}{1 - \% \ aP} \quad (1)$$

Replacing (Ppsdm – Cadm) por NPV, lies:

$$Ppasfm(I)^{1..11} = \frac{NPV + \Sigma Acsfm(I)^{1..11}}{1 - \% \ aP} \quad (2)$$

Note thateachIncotermsTermischaracterizedaccordingtothecostmadeuptotheplacedesignated for thetransferofownershipoftheproduct, therefore, for eachtermthereisthe sum ofthecostsuptothattermandconsequentplaceoftransfer.

• EXW Term (I) 1 - Seller / Exporterbearsallexpensesuntilthe cargo isdeliveredtoyourpremisesorat a locationindicatedbyhim. Althoughtheaforementionedterm determines thattheresponsibility for loadingthe cargo in thecarriervehicleisnottheseller / exporter's, it must bearthecosts for the delivery ofthe cargo readyand in shippingconditions, accordingtothepurchaseandsaleagreement, assumingthisformscostsandrisksinherenttotheoperation:

$$Ppasfm(I)^1 = \frac{NPV + \Sigma Acsfm(I)^1}{1 - \% \ aP} \quad (3)$$

• Term FAS (I) 2 - Seller / Exporterbearstheexpensesuntilthe delivery ofthe cargo atthenamedportofshipment, nexttothesideofthenamedShipandwiththeexpenseswiththeeffectiveclearance for export.

In thisterm, thebuyer / importerbearsthecosts for hiringinternational sea freight, beingresponsible for sendingtotheseller / exporter, thebooking (placereservation), withthenameoftheship, designatedportofshipmentandexpected date ofshipment:

$$Ppasfm(I)^2 = \frac{NPV + \Sigma Acsfm(I)^{1..2}}{1 - \% \ aP} \quad (4)$$

• FOB Term (I) 3 - Seller / Exporterbearsthecostsuntil delivery ofthe cargo stowedinsidethenamedShip, atthenamedportofshipmentandwiththecostsofeffectiveclearance for export.

In thisterm, thebuyer / importerbearsthecosts for hiringinternational sea freight, beingresponsible for sendingtotheseller / exporter, thebooking (placereservation), withthenameoftheship, designatedportofshipmentandexpected date ofshipment:

$$Ppasfm(I)^3 = \frac{NPV + \Sigma Acsfm(I)^{1..3}}{1 - \% \ aP} \quad (5)$$

• Term FCA (I)⁴ - Seller / Exporterbearstheexpensesuntilthe cargo isdeliveredtotheinternationalcarrieroranotherperson appointedbythebuyer / importer, sothattheinternationaltransportvehiclecanbeloaded.

In thisterm, thebuyer / importerbearsthecosts for hiringinternational sea freight, beingresponsible for sendingtotheseller / exporter, thebooking (placereservation), withthenameoftheship, designatedportofshipmentandexpected date ofshipment:

$$Ppasfm(I)^4 = \frac{NPV + \Sigma Acsfm(I)^{1..4}}{1 - \% \ aP} \quad (6)$$

• CFR Term (I)⁵ - Seller / Exporterbearsthecostsuntil delivery ofthe cargo stowedinsidethenamedShip, atthenamedportofshipmentandwiththecosts for contractinginternational sea freight:

$$Ppasfm(I)^5 = \frac{NPV + \Sigma Acsfm(I)^{1..5}}{1 - \% \ aP} \quad (7)$$

• CPT Term (I)⁶ - Seller / Exporterbearsthecostsuntil delivery ofthe cargo totheinternationalcarrierandthecosts for hiringinternationalfreight:

$$Ppasfm(I)^6 = \frac{NPV + \Sigma Acsfm(I)^{1..6}}{1 - \% \ aP} \quad (8)$$

• Term CIF (I)⁷ - Seller / Exporterbearsthecostsuntil delivery ofthe cargo totheinternationalcarrier, withthecosts for contractinginternational sea freightandwiththecostswithInternationalInsurance:

$$Ppasfm(I)^7 = \frac{NPV + \Sigma Acsfm(I)^{1..7}}{1 - \% \ aP} \quad (9)$$

• Term CIP (I)⁸ - Seller / Exporterbearsthecostsuntil delivery ofthe cargo totheinternationalcarrier, withthecosts for hiringinternationalfreightandwiththecostswithInternationalInsurance:

$$Ppasfm(I)^8 = \frac{NPV + \Sigma Acsfm(I)^{1..8}}{1 - \% \ aP} \quad (10)$$

• DAP Term (I)⁹ - Seller / Exporterbearsthecostsuntil delivery ofthe cargo

atthebuyer / importer's establishment, or at a locationnamedbyhim:

$$Ppasfm(I)^9 = \frac{NPV + \Sigma Acsfm(I)^{1..9}}{1 - \% \ aP} \qquad (11)$$

• Term DPU (I)[10] - Seller / Exporterbearsthecostsuntil delivery ofthe cargo landedatthebuyer's / importer's establishment, or at a locationnamedbyhim:

$$Ppasfm(I)^{10} = \frac{NPV + \Sigma Acsfm(I)^{1..10}}{1 - \% \ aP} \qquad (12)$$

• Term DDP(I)[11] - Seller / Exporterbearstheexpensesuntil delivery ofthebaggageatthebuyer / importer's establishment, or at a placenamedbyhim, cleared for importandwithall taxes levied for nationalizationpaid:

$$Ppasfm(I)^{11} = \frac{NPV + \Sigma Acsfm(I)^{1..11}}{1 - \% \ aP} \qquad (13)$$

AccordingtoDuaandSinha (2018), there are several approaches toproductprices in global markets, includingcost-basedpricing, demand-basedpricing, competition-orientedpricing, productline-orientedpricing, proposalpricing, pricingbasedonaccessibility, anddifferentiatedpricing.

The cost-based approach includes methodssuch as Mark-up Price (Cost plus Pricing), AbsorptionCostPricing, ReturnPricingDestination Rate and Marginal CostPricing. Thisisdetailed in thesequence:

• In the Mark-up price, thepriceoftheproductisdefinedbyadding a specificmarginto its owncost, which varies dependingontheproduct, themarketandtheorganization'spolicy.

Thistechniqueisbasedonthehypothesisthatthedeman disimprecise, butwithprecision in costs. Thus, thedesired mark-up isaddedtocosts,

adjustingtheprice, adjustedtakingtrialanderrorintoaccount. The objectiveistoadjusttheprofit for a short andmediumtermplanninghorizon, notsacrificingsales for anexcessively high price;

• Pricesbasedondemandcanbeclassifiedintotwotypes: skimmingpricing - in whichtheorganizationaimstopractice high prices in thephaseofintroducingtheproductintothemarketand in pricingbasedonthepenetrationoftheproduct in themarket, thusseeking a greatmarketpenetration, throughrelativelylowprices;

• The pricedeterminedbythe marginal cost, aimstoincreasethecontributiontothefixedcost;

• Pricesbasedoncompetition, premium prices, discountpricesandparity / variable rate prices are themethodsavailable for thispricingtechnique. When anOrganizationpresents a diversifiedvarietyofproducts, which are groupedintoproductlines, thenthe total costsandthedesired total profitsoftheentireproductlineformtheprice;

• The absorptioncostpriceisthepricingmethodthatisbasedo ntheestimatedunitcostoftheproductatthe normal levelofproductionandsalesdemand;

• The auctionpriceisbasedontheconstitutionoftheprice, wherethey are fixedbasedonthevalues offeredbytheclaimants;

• Pricingbasedonaccessibilityintendsthatthedemandin g target audienceis in a position tobuytheproduct;

• Differentiatedpricing, adoptsthecriterion, ofdifferentprices for thesameproduct, for different zones / areasofthedemandingmarket.

Figure 3 presentsanexampleofthecalculations for theformationofprices, consideringtheNPV - Net valueoftheproductandtheIncoterms 1 - Exw; 2 - FAS; and 3 - FOB.

Figure 3 – EXW pricingexampleto FOB

Source: authors (2020)

At theendofthissection, it canbesaidthatthewell-formedpriceallowstheorganizationtoachievetheexpectedgainsandwithoutsetbacks, alsoexpandingthepowerofcompetitivenessandallowingthenegotiationtodevelop in anethicalenvironmentandcommittedtocommercialloyalty.

III. CONCLUSIONS

Globalizationhasstimulatedcompetitionbetweenorganizationsand countries in the face oftheinternationalmarketscenario, and, as a consequence, therehasbeen a reduction in spatialandborderlimitsbetween countries.

In thiscontext, theknowledgeaboutinternationalsupplychains, alignedwithIncoterms, assumed a greatdealofrelevance, as it startedto determine andidentify, whichvariables are attributedtoeachterm, within a sequentialandcumulativestructure, determinedbythelocationoftransferofinformation. ownershipoftradedproducts.

It isworthrememberingthattheLogistics professional, in thesearch for lowercosts, must haveknowledgetocarry out operationsandpriceformation, thebenefitsgrantedbythe Trade Agreements, thetaxbenefitsonspecificoperationslinkedtotheproduct, the country, ortothesegment in whichthey are traded, as for example, theEx-Tariff, orreductionoftheimporttax,

whichisgrantedtoproductsthat do nothave similar nationalproductionandgenerateeconomicand social consideration for the country.

Importanceshouldbegiventotheobservationof conceptual andmathematical models for theformationofinternationalprices, as well as, for theknowledgeandmasteryoftechniques in theformationofthecomponentcostsofpricestobepracticedandthat include in theirstructureallthevariablesdominatedbythe professional ofcompetentlogistics.

In thissamelineofreasoning, thatis, in thesearch for processes thatgeneratelowercosts, theLogistics professional, also, must haveknowledge in relationtocustomsclearanceandespecially, thespecialcustoms regimes that, in their core, generatebenefits in reducing , suspensionortaxexemptiononimportedorexportedproducts, minimizingthecostsinvolvedandthusincreasingthepowerofcompetitivenessand, consequently, thelevelofeconomicand social developmentofthe country.

Finally, it isexpectedthattheLogistics professional understandstheimportanceofhisinsertion in thisscenarioand, mainly, hisimportance for thedevelopmentofnecessaryskills for a goodformationofprices, allowingtheorganizationsand countries involved, toconqueradvantageouspositionscomparedtointernationalcompetitors.

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