ORIGINAL ARTICLE - Forest Products Science and Technology

Drawback Customs Regime as an Instrument to Stimulate Exports in the Brazilian Timber Sector

Karine Meire Leite Tostes¹ Daiane de Moura Borges Maria² Karine Ramos da Rosa Bellon² Ricardo Jorge Klitzke² Romano Timofeiczyk Junior³ Márcio Pereira da Rocha²

Abstract

This paper aims to address the export incentive mechanisms through a case study exploring the advantages of the Integrated Drawback system, in a wood flooring company. A study was conducted indicating the inputs entered into the Integrated Drawback system in Suspension mode for the laminate flooring production process. The procedures required to acquire inputs using Drawback were described and the taxes that will be suspended were described. This is an efficient public policy instrument to export incentive. The Drawback regime can be applied by any exporting company, provided that the acquired inputs are used in the manufacturing process. In addition, it shows that tax reform is important measure to increase Brazilian competitiveness in different sectors, including the wood sector.

Keywords: Export, Hardwood Floors, International Trade, Taxes.

1. INTRODUCTION AND OBJECTIVES

For several decades, Brazilian managers have found an incentive for exports to reduce costs in government policies and laws, especially those generated due to the tax burden. One of these incentives is the Customs Drawback Regime. The Drawback is a foreign trade policy instrument used in several countries, whose purpose is to relieve taxes on imported and domestic inputs used in the manufacture of products intended for export (Pirett, Pirett & Cezarino, 2019). There are no records of the use of this public policy instrument during its development in the forestry area, and even currently there is still a scarcity of use of the incentive in this sector.

Drawback was instituted in Brazil in 1934 and repealed in 1957, but returned on November 18, 1966, by Decree-Law no. 37 (Araújo & Sartori, 2004). After some updates, the regime became known as Integrated Drawback under its modalities; Law 11,945, 2009, and Law 12,350, 2010 (BRASIL, 2009; BRASIL, 2010).

There is also Decree-Law No. 37 of November 18, 1966 (Brazil, 1966); ICMS Agreement 27/1990 (CONFAZ, 1990); Decree No. 6. 759, of February 5, 2009 (Brazil, 2009); Joint Ordinance RFB/Secex No. 467, of March 25, 2010 (SECEX, 2010); Joint Ordinance RFB/Secex No. 3, of December 17, 2010 (SECEX, 2010); SECEX Ordinance No. 44, of July 24, 2020 (SECEX, 2020); ICMS Agreement 48, of April 25, 2017 (CONFAZ, 2017) and Provisional Measure 1..079, of December 14, 2021 (Diário Oficial da União, 2021). Due to its scope and peculiarity, this is a topic rarely used by exporting companies in Brazil, despite its relevance to the national economy (Sosa, 2005; Aragão, 2008).

Special customs regimes are distinguished from the legal regime by the suspension or exemption from taxes levied on foreign trade operations. These regimes can facilitate the operations of exporters, encourage the development of some areas of the country or specific sectors of the economy, and improve their competitiveness (SISCOMEX, 2019).

¹Universidade Federal do Paraná (UFPR), Departamento de Engenharia Industrial Madeireira, Curitiba, PR, Brasil.

²Universidade Federal do Paraná (UFPR), Departamento de Engenharia e Tecnologia Florestal, Curitiba, PR, Brasil.

³Universidade Federal do Paraná (UFPR), Departamento de Economia Rural e Extensão, Curitiba, PR, Brasil.

About Drawback, Piccolo (2017) reports that in a search conducted on the website of the Supreme Court, it was possible to verify the existence of two judgments, nine monocratic decisions, and one decision of the Presidency. The same author reports that based on the facts, the judgments and the theories analyzed, one can conclude that the judicial activism performed by the Supreme Court of Justice (SCJ) is accompanied by a percentage of politicization in these analyzed precedents. The Supreme Court understands, correctly, that it is not its place to examine the drawback issue, since it is agreed upon in infra-constitutional legislation. The authors also clarify that by shortening the list of indispensable requirements to obtain the benefit, one notices a concern on the part of the judges not to burden taxpayers.

Between the periods from October 2019 to September 2020, exports under the Drawback regime in suspension mode corresponded to US\$ 42,4 billion, 20% of the total goods exported by Brazil (US\$ 212,1 billion) the number of favored companies was 1.769. In the same period mentioned above, imports under the same regime corresponded to US\$ 5,2 billion, 3.3% of the total imported goods (US\$ 158,1 billion), and the number of favored companies was 1.493. Goods exported using the Drawback regime in September 2020, based on aggregate factor distribution, participated with 35,9% with manufactured products, 29% with semimanufactured products, and 35,2% with essential products (CONAE, 2020). The number of exports and imports during this period was affected due to the Covid-19 pandemic and the global crisis. In a study surveyed by Barros et al. (2020), it was possible to conclude that there is a spiral between trade disintegration and governance fragmentation, which feeds back and tends to prolong the crisis in South America more than in other regions of the world, for example.

The contribution of the customs regime is the reduction in tax values. This reduction ends up generating significant savings in production costs. The *Drawback* enables several benefits to companies, which are perceived differently depending on the sector in question.

The use of this benefit is conditioned to the execution of the export commitment, assumed by the beneficiary of the regime, to control the stocks of imported raw materials, production processes, and storage of finished products (Moori et al. 2011). The same authors reinforce that the use of *Drawback* not only makes it possible to reduce industrial costs, but also increases the quality of the finished product, improves information technology, generates greater participation in the foreign market, more jobs, and greater efficiency in production capacity.

In several studies, Grassmann & de Moura (2018), Almeida et al. (2019); Pedroza Filho & Rocha (2019), Floriano et al.

(2020), Pereira et al. (2020), Takano et al. (2021) using the integrated Drawback system achieved a reduction in the costs of inputs used in the export of products, generating significant savings in production costs and increasing their competitiveness in the market. The Brazilian forestry market is characterized by exporting products with low added value, mainly sawn wood and cellulose (Andrade, 2014). In 2020, the country exported US\$ 5.984,1 million in pulp, 2,85% of total Brazilian exports. The primary destinations were China and the United States. US\$ 115,55 million in raw wood was exported, 0,06% of total exports. In manufactured wood, US\$ 525,08 million was exported, representing 351.941 tons of wood (Comex Stat, 2021), of which engineered floors represent 4.028.076 kg, 69.866.937 kg are represented by massive floors (ABIMCI, 2021). Such information should be widely discussed and disseminated, so that the government can develop in parallel to the systems of cost reduction in the export of inputs, and more sustainable development measures for the forest sector.

In an interview with Canal Rural (November 18, 2020), Marcelo Weicheteck, Manager of STCP Engenharia de Projetos Consulting, stated that the Brazilian currency's devaluation (Real - R\$) concerning the dollar makes the scenario favorable to exports. This scenario makes Brazilian wood more competitive in the foreign market (Florentino, 2020).

This was evident in the year 2020 and 2021, when the world was at the height of the crisis of COVID 19 and many companies, were with their production interrupted for longer than Brazil companies, so there was an increase in Brazilian exports. The projections for 2022 Gross Domestic Product (GDP) growth have been undergoing significant revisions from 2021, when they were around 2.4%, and are now 0.3% on average (Bastos, 2022). The same author explains that the exchange rate, for example, after changing levels during the pandemic crisis, should appreciate a little, in nominal terms, in the coming years, according to market expectations.

In the context of the above, the case study aimed to apply the Integrated Drawback regime under the Suspension modality on imported production factors, in an engineering flooring company, to reduce production costs and make the company more competitive in the international market and raises important questions for public policy and forestry in Brazil.

2. MATERIALS AND METHODS

In this work, the research was descriptive and exploratory. Descriptive, because it demonstrates the characteristics of the process of applying the Integrated Drawback customs regime in suspensive mode as an instrument of the strategy to reduce the tax costs of imported inputs destined for export,

and exploratory, since it is a case study, corroborating the proposed objective.

The field research was conducted in a company, located in the state of Paraná, Brazil. The company is renowned in the national and international market that manufactures engineering flooring, where the phases of planning, organization, and execution of the integrated customs regime of Drawback took place. Considering that the company is medium-sized, with at least 60% of its production destined for export. The savings generated by the Drawback regime can be advantageous when passed on in the value of the final product, making the company more competitive with other wooden floor manufacturers, and allowing an increase in sales. The company provided documentary data for the study. The data analysis was quantitative to show the cost reduction and qualitative, presenting advantages of applying the Drawback regime in the company in question.

2.1. Necessary procedures for the acquisition of Drawback

The export of inputs, whether by land, air, or sea, can be performed by any company, regardless of its size, because it is not a highly complex operation. This topic describes the procedures for the acquisition of inputs using the Integrated Drawback system in the Suspension mode.

2.1.1. Importation

After the goods are purchased from abroad, the Import License (IL) is issued, which must contain the number of the Concessory Act, so that the taxes are suspended. This license is issued through SISCOMEX, based on information of a commercial and financial nature, such as net weight, NCM, Value, Incoterm, Exporter and Manufacturer. Some goods dispense the issuance of the IL, however the products that will be indicated in this work need it. In addition, in the ICMS exemption guide should be mentioned the legal basis of tax exemption "(Regulation of ICMS/PR) Decree 7.871/2017 - Annex V - Item 46", linking the LI.

After issuing the Tax Declaration (TD), the Invoice of Entry of Goods is issued by the importer. This Invoice is used to release the cargo at the Federal Revenue Service. In the case of purchase with Drawback, it is necessary to link the Concessory Act, and use the Fiscal Code of Operations and Services (COS) 3127, which is used for purchase for industrialization under the Drawback regime. The purchases of goods to be used in the industrialization process and subsequent export of the resulting product are classified in this code.

2.1.2. Export Register

After the arrival of the raw material acquired under the Drawback regime in the factory, and after going through at least one of the following processes: transformation, processing, assembly, renovation or reconditioning and packaging, and the commercialized product is finalized, the Export/Sales invoice is issued, using the COS 7.127 - Sale of production of the establishment under the Drawback regime. It must contain Description of the goods; NCM; Quantity in the statistical unit of measurement of the goods (e.g. kg, m², m³) and Number of the Concessory Act.

After the issuance of the Invoice, the process of exporting the finished product is initiated, as well as the processes of customs clearance. For this, the SDE - Single Declaration of Export - is issued, the export invoice is linked to the SDE, stating that the products produced are being exported. The issuing of the SDE and the other customs clearance procedures are usually carried out by the customs broker. The "Suspension Integrated Drawback Manual" available in the online portal Sistema de Comércio Externo - SICOMEX is recommended, with several information and manuals on the subject (MINISTRY OF ECONOMY, 2020). For this research, only import inputs were considered.

2.2. Taxes levied on the acquisition of imported raw material before and after the Drawback regime

In the acquisition of raw material imported without Drawback regime, the purchase invoice presents the following taxes, where the rates of each tax vary from NCM (Common Nomenclature of Mercosur) to NCM, and ICMS (Tax on Circulation of Merchandise and Service) depends on the states in which the transaction occurs (SISCOMEX, 2019). For this case study, the taxes analyzed were: ICMS (Tax on Circulation of Goods and Services); IPI (Industrialized Product Tax); II (Import Tax); PIS (Social Integration Program); COFINS (Social Security Financing Contribution). For purchases in which maritime transport is used, there are two additional rates. The AFRMM rate (Additional Freight for Renewal of the Merchant Navy) and SISCOMEX rate, which is the Integrated Foreign Trade System's usage rate, for issuing the DI (Tax Declaration).

The raw materials imported by the timber company under the Drawback regime were EPI 1911 adhesive; EPI 1971 adhesive; Hardener Catalyst 1993 (the three products are from Singapore manufacturer Akzo Nobel); Amendoim Wood and Guajuvira Wood (both imported from Paraguay). Adhesives are used in the wood bonding process. They are

composed of a water-based polymer emulsion and an isocyanate crosslinker (Guo et al. 2018). The same authors explain that there is remarkably strong interest in the application of EPI (Polymer Isocyanate Emulsion) adhesives in both solid wood processing and wood-based panel production due to high bond strength, good heat resistance, and environmental soundness.

The hardener catalyst is used to accelerate the curing process of adhesives. The company studied uses it to speed up the bonding process of the two types of wood used, which are popularly called Amendoim wood and Guajuvira wood. These are noble wood species, much appreciated by customers for their beauty and high resistance, and therefore indispensable in the company's production process.

The US dollar exchange rate, used to compose the products' values, was 3,937 Brazilian Real of 4/18/2019, the date on which the data were collected in the company.

3. RESULTS AND DISCUSSION

3.1. Imported inputs, per unit of production, used for the production of floors facing the foreign market with and without the use of Drawback

This topic shows how important the Drawback system is for reducing costs and increasing the competitiveness of any type of industry since it demonstrates how much the company under analysis was able to reduce costs with the acquisition of imported inputs required for its production. In addition, it can help to increase jobs and positive benefits to society. Many companies have not yet understood or had the opportunity to know the benefits that this system can bring to the company, probably because it is not well advertised by the government, since it would decrease the collection of federal taxes.

Table 1 shows the annual quantity and unit values of each imported input (with and without taxes) used to produce engineered floors that are sold on the foreign market. The data are explicitly presented by-product unit (m² and kg). These data demonstrate the additions to the costs of inputs caused by all taxes and how much these costs are reduced with the use of Drawback. These data are better detailed in Table 2.

In the year 2018, wood industrial production resulted in the exported value of approximately US\$ 406 million in wood flooring of the solid and engineered types (Brazilian Association of the Mechanically Processed Wood Industry 2019). This can be explained because engineered floors have been widely used in residential and commercial environments, due to the technological properties of wood and costs, mainly (Costa et al. 2021). In this way, it is possible to understand the reason for the high annual quantity required, in Table 1, which is nothing more than the high demand by the consumer market.

Table 2, shows the annual amounts spent on imported products: EPI 1911 Adhesive - one container per year; EPI 1971 Adhesive - two containers per year; Catalyst Hardener 1993 - one container per year; Amendoim Wood and Guajuvira Wood - two carts per year each, since they are land transport, there is no charge for AFRMM - Additional Charge for Renewal of the Merchant Marine. With the use of Drawback, the expenses borne by the company are, in this context, limited to the costs of the inputs, plus freight and the SISCOMEX fee only. Thus, it is possible to observe in the same Table that the Amendoim and Guajuvira woods have zero IPI, and this way, the reduction was lower than the other inputs that have a rate with more taxes inserted, consequently, the other inputs have a better cost reduction with the Drawback regime. The last three columns of Table 2 show the values of the Taxes added to the AFRMM rate (%), Value (US\$), as well as the aliquot (%) zeroed, that is, how much the company managed to reduce financial expenses with the use of the regime.

For a government to keep society organized and provide the necessary services to the population, it is necessary to collect taxes. Brazil has one of the highest tax burdens in the world, equivalent to about 40% of the Gross Domestic Product (GDP), according to the Internal Revenue Service, in which raises the cost of services and products that the country has (Lima and Rezende, 2019; Silva et al. 2021). The same authors expose that taxes are considered to have the highest collection burden among taxes. This can be reinforced by observing the "tax rate" column in Table 2 of this research, which also emphasizes the importance of what is explained in topic 2.2.

Table 1. Annual amount of inputs purchased, unit values of each input imported with and without taxes, used to produce engineered floors considering the 2019 dollar.

Product	Annual quantity purchased	Quantity per m² / floor	Unit value without tax (US\$)*	Unit value with taxes (US\$)*	Unit value with Drawback (US\$)*
EPI 1911 Adhesive	6840 kg	0,19kg	1,1	2,09	1,40
EPI 1971 Adhesive	75600 kg	0,21kg	1,66	2,65	1,71
Hardener Catalyst 1993	16909,2 kg	0,0427kg	4,5	7,44	4,62
Amendoim Woods	60 m ³	0,00678m ³	1550	2312,65	1684,75
Guajuvira Woods	60 m ³	$0,00714m^3$	1255	1902,77	1389,75
Total	-	-	2812,26	4227,60	3882,236

^{*}Reference value for the year 2019

Table 2. Annual cost of the EPI 1911, EPI 1971 adhesives, Hardener Catalyst, Amendoim Wood, and Guajuvira Wood without Drawback regime and with the Drawback regime.

			Taxes added to the AFRMM rate		
Description	US\$	Alíquot	and consequent reduction of value with Drawback (%)	US\$	Alíquo
Without Drawback				With Drawback	
EPI 1911 adhesive	7524,00	100%		7524,00	
II	1053,36	14%			0,00%
PIS	158,00	2,10%			0,00%
COFINS	726,07	9,65%			0,00%
IPI	428,87	5%	33,18%		0,00%
ICMS	2183,91	18%			0,00%
AFRMM	200,00				0,00%
Shipping	2000,00			2000,00	
Siscomex rate	42,55			42,55	
Total	14.316,75			9566,55	
EPI 1971	125496,00	100%		125496,00	
II	17.569,44	14%			0,00%
PIS	2.635,42	2,10%			0,00%
COFINS	12.110,36	9,65%			0,00%
IPI	7.153,27	5%	27.200/		0,00%
ICMS	30.500,92	18%	35,19%		0,00%
AFRMM	400,00				,
Shipping	4000,00			4000,00	
Siscomex rate	85,09			85,09	
Total	199.950,51			129581,09	
talisador Hardener 1993	76091,40	100%	37,89%	76091,40	
II	10.652,80	14%			0,00%
PIS	1.597,92	2,10%			0,00%
COFINS	7.342,82	9,65%			0,00%
IPI	8.674,42	10%			0,00%
ICMS	19.188,34	18%			0,00%
AFRMM	200,00				0,00%
Shipping	2000,00			2000,00	.,
Siscomex rate	42,55			42,55	
Total	125.790,24			78133,95	
Amendoim wood	93000,00	100%		93000,00	
II	5.580,00	6%			0,00%
PIS	1.953,00	2,10%			0,00%
COFINS	8.974,50	9,65%			0,00%
IPI	-	0%			0,00%
ICMS	21.166,67	18%	27,15%		0,00%
AFRMM	-				0,00%
Shipping	8000,00			8000,00	
Siscomex rate	85,09			85,09	
Total	138.759,26			101085,09	
Guajuvira wood	75300,00	100%		75300,00	
II	4.518,00	6%			0,00%
PIS	1.581,30	2,10%			0,00%
COFINS	7.266,45	9,65%			0,00%
IPI	-	0%			0,00%
ICMS	17.415,15	18%	26,96%		0,00%
AFRMM	-	2070			0,00%
Shipping	8.000,00			8000,00	3,0070
Siscomex rate	85,09			85,09	
Total	114.165,99			83385,09	
	Without L)rawhack	With Drawback	Econ	omv
Cotal (all the products)	US\$ 592.982,75		US\$ 401751,76	US\$ 191.230	

II (Import Tax); PIS (Social Integration Program); COFINS (Social Security Financing Contribution); IPI (Industrialized Product Tax); ICMS (Goods and Service Circulation Tax); AFRMM (Freight Additional for Renewal of the Merchant Navy); Siscomex rate (utilization rate charged by the Integrated Foreign Trade System). taxes added to the AFRMM rate e consequente reduction of value with Drawback (%)

Silva et al. (2021) question in their research if there is hope for a fair tax reform in the future, since, according to Smith (1988), high taxes, either by reducing the demand for taxed goods or by stimulating smuggling, end up bringing the government a lower revenue than that which could be obtained with lower taxes. Thus, observing Table 2, one can reflect that the Drawback customs regime is not the solution to the tax issue, but it is an alternative to reduce taxes in order to increase profitability in the industry sector, thus encouraging companies to increase their production.

The impact of Drawback regime explained in item 2.2 must be highlighted where the rates of each tax shown in Table 2 is changed s not only by in the price of the product but also changes from NCM (Common Nomenclature of Mercosul) to NCM, and the ICMS (Merchandise Circulation Tax) and Service) depends on the states in which the transaction occurs. In cases where there is a need for maritime transport, there is also an AFRMM rate and SISCOMEX rate, which is the utilization rate charged by the Integrated Foreign Trade System (SISCOMEX) for issuing the DI (Tax Declaration).

ICMS is one of the most important sources of revenue for states, as it is state-owned, its rate is defined locally and the tax amount can vary both according to the goods, the service and the movement, whether internal or interstate (Agência Senado, 2022). The imported inputs, mentioned in Table 2, did not change the value of ICMS, since their destination is only for the state of Paraná. The IPI, in turn, is the responsibility of the union and has a regulatory function, as it charges products according to their utility. With the IPI, it is possible to apply lower or even zero rates to products considered essential (DireitoNet, 2022), as can be seen in Table 2 for the Amendoim and Guajuvira woods.

Initially, the sum of taxes with AFRMM for EPI 1911 and EPI 1971 products represents 33.18% and 35.19%, respectively, of the final product value (US\$ 4,750.21 and US\$ 70,369.42). The savings of EPI 1971 become more significant than that of EPI 1911 due to the higher tax-free price of the product. With the EPI 1971 product, the company acquires the tax exemption and AFRMM rate, being necessary to pay the value of the product (US\$ 125,496), freight (US\$ 4,000) and the Siscomex Fee (US\$ 85.09). Thus, the amount to be paid for the import of this raw material is US\$ 129,581.09 instead of US\$ 199,950.51.

The taxes added to the AFRMM rate for the Hardener Catalyst 1993 represent 37,89% of the final product's value (US\$ 47656,30). The most significant savings, as the IPI rate is 10%. The company acquires the exemption from taxes and the AFRMM rate, with which it is only necessary to pay for the value of the product (US\$ 76091,4), the freight (US\$ 2000), and the Siscomex rate (US\$ 42,55). Thus, the amount to be paid for importing this raw material is US\$ 78133,95 instead of US\$ 125.790,24.

The percentage of each charge that makes up the final value of Amendoim wood without Drawback added together represents 27,15 % of the value of the final product (US\$ 37.674,17). Similarly, with Drawback Suspension's application in the acquisition of Amendoim wood, the company acquires the tax exemption (in this case, there is no incidence and consequent exemption from AFRMM). In this way, the company will pay for the product's value (US\$ 93000), freight (US\$ 8000), and the Siscomex rate (US\$ 85,09). The amount to be paid for importing this raw material is US\$ 101085,09 instead of US\$ 138.759,26.

The added taxes represent 26,96% of the final product's value (US\$ 30.780,9) of Guajuvira wood, saved with the Drawback Suspension applied. As for Amendoim wood, with the application of Drawback Suspension in the acquisition of Guajuvira wood, the company acquires the tax exemption, paying for the value of the product (US\$ 75300), the freight (US\$ 8000), and the Siscomex Rate (US\$ 85,09). Thus, the amount to be paid for importing this raw material is US\$ 83385,09 instead of US\$ 114.165,99.

3.2. Comparison of values before and after the Drawback regime

Figure 1 shows the values of products with and without the Drawback regime and their respective percentages saved for each imported input. There is a significant savings for the EPI 1971 adhesive mainly due to its large amount used annually by the company. Catalyst Hardener 1993 was the input whose reduction was the most extensive (37.89%), followed by EPI 1971 and EPI 1911, which had a reduction of 35.19% and 33.18%, respectively.

Due to the IPI of Amendoim and Guajuvira woods being zero, the reduction was 27,15% and 26,96%, respectively. Since the wooden floor is a product with high added value, it has a higher cost when compared to other types of floors, thus by reducing its cost, the acquisition of wooden floors could become more accessible to the consumer. The Drawback regime can be obtained by any company that serves the foreign market. Even with small-scale exports, if the company benefits from the drawback exemption regime, it will gain in the nationalization of its imports of inputs destined to produce finished products for export. Grassmann & de Moura (2018), in the import of inputs destined for the production of finished textile products for export, obtained a reduction in the cost of nationalization of inputs of up to 14%, values well below that found in this study. However, Almeida et al. (2019) in the fruit sector found using the special customs regime of Drawback as a cost reducer, 31,63%, a result very close to that found in this study. Such a system is not very bureaucratic and can be implemented in a simple way, including in timber companies. It is necessary to disclose this regime more for companies to join.

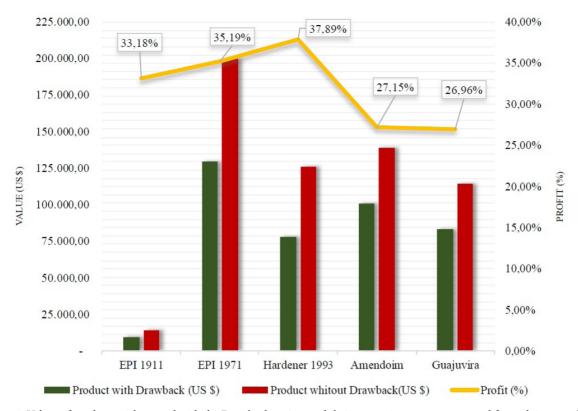


Figure 1. Values of products without and with the Drawback regime and their respective percentages saved for each imported input.

4. CONCLUSIONS

The drawback customs regime is an efficient public policy instrument to encourage exports and can be applied by any exporting company, as long as the acquired inputs are used in the manufacturing process. The use of drawback is primordial to increase the competitiveness of any company in the international market, whether in the forestry sector or not, allowing new investments, increased production capacity, and job creation. Furthermore, this article helps other companies to study and implement the drawback regime, which, although it is not well publicized, it is possible to see that the government has been working to debureaucratize the acquisition of the regime since currently, any exporting company can make use of it.

Although this research has cited a significant amount of laws, decrees, and articles relevant to the customs regime, there is still a lack of detail in the literature about the guidelines implemented through Brazilian public policies and especially about the command and control instruments that fit the theme addressed here, this being an interesting topic for future research. This research also shows how complex the tax system is in Brazil in the case of imported inputs, where many different taxes are applied. Thus, it can be seen that tax reform is important to increase Brazilian competitiveness in different sectors, including the wood sector.

SUBMISSION STATUS

Received: 29 Apr. 2021 Accepted: 31 Aug. 2022

Associate editor: Fernando Gomes 🗈

CORRESPONDENCE TO

Karine Meire Leite Tostes

Universidade Federal do Paraná, Departamento de Engenharia Industrial Madeireira. Av. Prefeito Lothário Meissner, 632, CEP 80210-170, Curitiba, PR, Brasil. e-mail: karineleite521@gmail.com

AUTHORS' CONTRIBUTIONS

Karine Meire Leite Tostes: conceptualization (Equal), data curation (Equal), formal analysis (Equal), funding acquisition (Equal), investigation (Equal), methodology (Equal), writing – original draft (Equal).

Daiane de Moura Borges Maria: data curation (Equal), formal analysis (Equal), investigation (Equal), writing – review & editing (Equal).

Karine Ramos da Rosa Bellon: writing – review & editing (Equal). Ricardo Jorge Klitzke: conceptualization (Equal), data curation (Equal), methodology (Equal), project administration (Equal), supervision (Equal), writing – original draft (Equal), writing – review & editing (Equal).

Romano Timofeiczyk Junior: writing – review & editing (Equal). Márcio Pereira da Rocha: writing – review & editing (Equal).

REFERENCES

Abimci, Associação Brasileira da Indústria de Madeira Processada Mecanicamente. Estudo setorial 2019: ano base 2018. 2019. Available from: https://abimci.com.br/publicacao/estudo-setorial-2019/.

Abimci, Associação Brasileira da Indústria da Madeira Processada Mecanicamente. Balanço das exportações 2020. [cited 2021 mar. 18]. Available from: https://abimci.com.br/balanco-das-exportações-2020/.

Agencia Senado. Senado Federal. Available from: https://www12.senado.leg.br/noticias/materias/2022/06/07/senadores-reagem-a-proposta-do-governo-de-reduzir-carga-sobre-combustiveis#:~:text=ICMS%3A%20Imposto,interna%20ou%20 interestadual. Acessed on Jul 2022.

Almeida AHP, Sampaio RF, da Costa WPLB, Júnior LAF, & da Silva JD. Regime aduaneiro especial de *Drawback* como redutor de custos no setor de fruticultura. Revista de Gestão e Contabilidade da UFPI. 2019; *6*(1): 35-55.

Andrade A. Setor brasileiro de Pisos de Madeira: Oportunidades e Ameaças. Ed, v. 139. Revista da madeira. 2014.

Aragão MRR. O papel do drawback nas exportações brasileiras no período de 1997 a 2007: um estudo de caso da Indústria Aeronáutica Brasileira [Master's thesis]. Pernabuco. Universidade Federal de Pernambuco; 2008.

Araújo ACMS, Sartori A. Drawback e o comércio exterior: Visão jurídica e operacional. São Paulo: Aduaneiras. 2004.

Barros P, Gonçalves J, Samurio S. Desintegração econômica e fragmentação da governança regional na América do Sul em tempos de Covid-19. *Boletim de Economia Política Internacional*, 27, 125-144. 2020.

Bastos EKX. Boletim de expectativas – fevereiro de 2022. Carta de conjuntura, nota de conjuntura 11. Nº 54. 1º trimestre de 2022. Instituto de Pesquisa Econômica Aplicada. 2022.

Brasil. Decreto-Lei n. 37, de 18 novembro de 1966. Dispõe sobre o imposto de importação, reorganiza os serviços aduaneiros e dá outras providências. Diário Oficial da República Federativa do Brasil, Brasília, DF (21 nov. 1966). [Cited 2021 mar. 18]. Available from: http://www.planalto.gov.br/ccivil_03/Decreto-Lei/Del0037.htm.

Brazil. Decree No. 6.759. From February 5, 2009. Available at http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2009/Decreto/D6759.htm#art820>. Accessed on May 2022.

Brazil. Decree-Law No. 37. of November 18, 1966. Available at http://www.planalto.gov.br/ccivil_03/decreto-lei/Del0037.htm. Accessed on May 2022.

COMEX STAT. Sistema de Estatísticas do Ministério da Indústria, Comércio Exterior e Serviços. 2021. [Cited 18 mar. 2021]. Available from: http://comexstat.mdic.gov.br/pt/comex-vis.

CONAE. Coordenação de Normas e Análise Econômica. Compilação dos dados de *Drawback* referentes ao mês de setembro de 2020. [Cited 19 mar. 2021]. Available from: http://siscomex.gov.br/wpcontent/uploads/2020/12/202009.pdf

Costa ACS, Pereira BLC, Silva MFA, Lengowski EC, Oliveira AC. Caracterização colorimétrica de pisos de madeiras tropicais amazônicas. *Advances in Forestry Science*, 8(3), 1511-1518. 2021. https://doi.org/10.34062/afs.v8i3.12533

DireitoNet. Available from: https://www.direitonet.com.br/artigos/exibir/9483/Imposto-sobre-produtos-industrializados. Accessed Jul 2022.

Florentino J. Exportação de madeira do Brasil vai de 10 mil a quase 1 milhão de toneladas em 10 anos. Canal Rural. 2021. [Cited 18 mar. 2021]. Available from: https://www.canalrural.com.br/noticias/exportacao-madeira-brasil-10-anos/.

Floriano RC, dos Santos PN, Martins LP, Abreu GA, & de Souza WG. *Drawback* como benefício fiscal: uma proposição em uma empresa de cosméticos no município de Varginha-MG. Brazilian Journal of Development 2020; *6*(2): 8540-8558.

Grassmann A & De Moura GB. O incentivo fiscal de *Drawback* Isenção: Estudo de caso da viabilidade de um processo na indústria química. In Congresso Sul Catarinense de Administração e Comércio Exterior. 2018; 2: 1-11.

Guo J, Hu H, Zhang K, He Y, Guo X. Revealing the mechanical properties of emulsion polymer isocyanate film in humid environments. Polymers. 2018; 10 (6): 1-18. http://dx.doi.org/10.3390/polym10060652

Lei n. 11.945, de 4 junho de 2009. Altera a legislação tributária federal e dá outras providências. Diário Oficial da República Federativa do Brasil, Brasília, DF (5 jun. 2009). [Cited 18 mar. 2021]. Available from: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2009/Lei/L11945.htm.

Lei n. 12.350, de 20 dezembro de 2010. Dispõe sobre medidas tributárias referentes à realização, no Brasil, da Copa das Confederações Fifa 2013 e da Copa do Mundo Fifa 2014; promove desoneração tributária de subvenções governamentais destinadas ao fomento das atividades de pesquisa tecnológica e desenvolvimento de inovação tecnológica nas empresas e de outras providencias. Diário Oficial da República Federativa do Brasil, Brasília, DF (21 dez. 2010). [Cited 18 mar. 2021]. Available from: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2010/Lei/L12350.htm.

Lima EM, Rezende AJ. Study on the evolution of tax burden in Brazil: an analysis from the Laffer Curve. *Interações (Campo Grande)*, 20, 239-255. 2019. https://doi.org/10.20435/inter.v0i0.1609

Ministério da Economia. Secretaria Especial de Comércio Exterior e Assuntos Internacionais Secretaria de Comércio Exterior Subsecretaria de Operações de Comércio Exterior – SUEXT 2020.

Moori RG, Konda ST, Gardesani R. Drawback customs regime in capital goods companies. Gestão & Regionalidade, 27(80), 85-96. 2011.

National Council of Treasury Policy. COVENANT ICMS 27/90. Available atwww.confaz.fazenda.gov.br. Accessed in May 2022.

National Council of Treasury Policy. ICMS COVENANT 48, OF APRIL 25, 2017. Available atwww.confaz.fazenda.gov.br. Accessed in May 2022.

Official Gazette of the Union. PROVISIONAL MEASURE NO. 1.079, OF DECEMBER 14, 2021. Available athttps://www.gov.br/. Accessed May 2022.

Piccolo AC. O poder judiciário e o Drawback. Trabalho de Conclusão de curso. Centro Universitário de Brasília – UniCEUB. Faculdade de Ciências Jurídicas e Sociais. 64p. 2017. Available from: https://repositorio.uniceub.br/jspui/handle/235/11229

Pedroza Filho MX, & Rocha HS. Subsídios técnicos à implementação do regime aduaneiro de drawback para exportações de tilápia. Embrapa Pesca e Aquicultura-Comunicado Técnico (INFOTECA-E) 2019; 1: 1-16.

Pereira KV, Krüger C, Dorneles BT, & de Freitas MC. A viabilidade de adesão ao regime aduaneiro especial de D*rawback* como redutor de custos em um frigorífico de bovinos. In congresso Associação Nacional de Programas de Pós-Graduação em Ciências Contábeis 2020; 14: 1-18.

Pirett CNS, Pirett CCNS, Cezarino LO. A importância do regime aduaneiro de *Drawback* para internacionalização de empresas brasileiras. Internext 2019; 14: 59-75.

Secretariat of Foreign Trade. JOINT ORDINANCE RFB / SECEX N° 467, FROM MARCH 25, 2010. Available at http://normas.receita.fazenda.gov.br/. Access in May 2022.

Secretariat of Foreign Trade. JOINT ORDINANCE RFB / SECEX NO. 3, OF DECEMBER 17, 2010. Available athttp://normas.receita.fazenda.gov.br/. Accessed May 2022.

Secretariat of Foreign Trade. ORDINANCE NO. 44, OF JULY 24, 2020. Available athttp://www.siscomex.gov.br/. Accessed in May 2022.

Sistema De Comércio Exterior. Glossário. [Cited 14 mar. 2021]. Available from: http://siscomex.gov.br/informacoes/glossario/.

Silva DKPA, de Souza NA, Passador G. The evolution of the tax burden in Brazil. Revista Acadêmica Faculdade Progresso, 7(2). 2021.

Smith A. A riqueza das nações. São Paulo: Nova Cultural, 1988.

Sosa RB. Glossário de Aduana e Comércio Exterior. Ed. Aduaneiras; 2005

Takano ALR, Cabrera LC & Caldarelli CE. Cadeia Produtiva e Mercado Cafeeiro no Brasil: Desafios e Potencialidades. Revista Economia Ensaios 2021; 36(1): 128–145.