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Subtheme : *Breaking the mold* – Do we need to develop new types contributors to the fashion world? How can we improve and find innovative and sustainable business models and new collaborative forms?

Characterization of first hand going to secondhand retailing market : analysis framework review on new collaborative and data-oriented business models

Keywords : circular economy, secondhand market, resale, data, first hand market, fashion

Introduction

As the secondhand market shows a potential Compound Annual Growth Rate of 15% to 20% over the next five years in the apparel, footwear, accessories and luxury items (BCG, 2018), fashion businesses should implement more and more initiatives to enter this attractive market (Kant Hvass, 2015). With the rapid growth of the online resale, driven by a few digitally born actors, a survey conducted by McKinsey (2020) confirms moreover a stronger trend toward online channels and secondhand fashion items since the beginning of the pandemic. Concomitantly, fashion brands and retailers appear to be more and more operative in the secondhand market which participates in the circular economy (Bocken & Co, 2016) by creating a closed-loop system. However, those secondhand initiatives seem to be multifaceted: partnering with existing second-hand digital platforms, launching its own brands' secondhand platform, offering secondhand corners in physical stores, acquiring a stake in a secondhand actor or creating a peer-to-peer platform**.** In September 2021, the well-established French department stores Galeries Lafayette opened the space "(Re)store" almost

taking more than 500m2 at their emblematic flagship Galeries Lafayette Haussmann location, dedicated to second hand and promoting sustainable fashion labels.

In addition, behind these various initiatives, it seems to lie different motivational factors, and one of them tends to be focused on the product collection and the analysis of secondhand data.

Moreover, some specific services are emerging, bringing to brands and retailers a data-oriented service, focused on the secondhand market through interfaces between brands and resale marketplaces and data analyzes in the process of reselling. As Keunyoung (2020) develops in his research, the role of data in the fashion industry started with the e-commerce boom. This led to a data-driven decision-making approach for some fashion brands and retailers, allowing them to improve sales and margins through three main pillars: sales data, product information, and consumer data.

There are both a lack of research on data in the fashion industry (Jain et al. 2017) and on secondhand market business models (Gopalakrishnan and Matthews, 2018). The existing research regarding data in the fashion industry is mainly investing the artificial intelligence (AI) technologies in retail (Thomassey and Xianyi, 2018), customer experience and trendcasting. On the other hand, the existing research studying fashion secondhand market focuses mainly on secondhand actors as Gopalakrishnan and Matthews (2018), and not on firsthand actors. However, in a broader scale, research about sustainability in the fashion industry puts forward the key role of circularity, as the last report of Ellen MacArthur Foundation shows (Ellen MacArthur Foundation, 2021). The report showcases testimonies of contemporary designers such as Gabriela Hearst or Marine Serre, insisting on designing clothes that can sustain and thus have many lives through secondhand loops.

In this article fifty secondhand initiatives integrated in firsthand retailing are examined through nine key characteristics developed in four main levels: 1. Organization, 2. Secondhand business processes, 3. Product and 4. Data mining. The proposed analysis framework is presented and detailed in section 2.

With this research, our goal is hence to analyze how firsthand actors invest the secondhand market and how their initiatives can be categorized, leading to the need of new business models and data-oriented services. It aims at identifying trends and specificities that are emerging in this new ecosystem, while integrating in the framework two current subjects in the fashion industry: sustainability on one hand and data mining on the other hand. The use of a qualitative research methodology supported by an extensive literature review on secondhand market evolution and new actors led the researchers to semi-structured interviews and exhaustive study on site and on the web of the sample of fifty initiatives. The analysis of the fifty secondhand initiatives through the framework's key characteristics in section 3 highlights how these patterns, stakes and perspectives contribute to new collaborative forms in the fashion industry, encouraging circular economy and new sustainable business models through emerging services.

Section 2 – Analysis framework

In order to analyze some trends regarding firsthand actors going to secondhand retailing market, nine key characteristics were compiled in a framework analysis of four main levels: 1. Organization, 2. Secondhand business processes, 3. Product and 4. Data mining.
The first level is focused on defining the firsthand actors that take secondhand initiatives, that we called organizations: type of organization, market segment of the organization and possible membership in a sustainable agreement or coalition.

A. **Organization**:
1. **Type**: Types of organizations had to be considered regarding the economic activity of the organization and their distribution channels within the fashion industry. As the distribution channels are in a phase of radical change (Aiolfi & Sabbadin, 2019), we will study both physical stores and e-commerce actors. The physical retailers will be categorized as "department stores", "concept stores" or "retail chains". The digital retailers will be categorized as "pureplayers" and fashion and luxury brands will be part of the same category "brands". The last category, "groups", refers to the "Luxury Big Business" owning different brands (Donzé, 2017), such as LVMH, Kering and Richemont.

The observed organizations of the fashion and luxury industry are categorized in those 6 different types.

2. **Market segment**: actors of the fashion industry are shaped between fast-fashion and luxury: luxury actors are the ones that guarantee the highest level of quality and thus are premium priced (Fuchs et al. 2013; Nieroda et al, 2018); while fast fashion is often characterized by accessible and trendy products and low prices (Amatulli et al., 2016). Moreover, other categories emerged in between those two market segments: industry reports and articles have begun to use the term "affordable luxury" to highlight the rise in popularity of durable goods, fashion products and food (Mundel et al., 2017). In the research conducted by Mundel et al., participants perceived affordable luxury to be less expensive than luxury goods but maintaining a high quality. Thus, among the firsthand actors studied in this paper, we split them into four main segments of the fashion market depending of their prices and quality of their products: low-end market that also encompasses fast fashion, mid-range market, affordable luxury and luxury. Some actors are both categorized in affordable luxury and luxury such as department stores like Selfridges or Nordstrom.

3. **Member of a sustainable agreement or coalition**: as fashion brands' images are more and more intertwined with sustainability issues (Kumar et al., 2017), consumers pay more attention to the sustainability aspect of the products they buy (Kumar et al., 2017). In this context, we included a sustainable characteristic to examine deeper the sustainable engagement of the firsthand actors while looking at their membership to one or few of the four main sustainable agreements and coalitions of the fashion industry worldwide: the Sustainable Apparel Coalition, the Fashion Pact, the Global Fashion Agenda and Paris Good Fashion.

The second level of characteristics aims at defining the secondhand business processes that the firsthand actors implemented, by two main characteristics: their integration mode and the involvement of a third party in the process of integrating a secondhand service.

B. **Secondhand business processes**:

1. **Integration mode**: as Kerli Kant Hvass develops in her article (2015), the ways of integrating second hand into a business are more and more diversified and form a new phenomenon concerning fashion brands. A survey conducted by the Boston Consulting Group (Bianchi et al., 2020) presents four engagement models for firsthand actors going to the secondhand market: acquisition, partnership, joint venture and newly created offering. However, this typology is applicated to the hard luxury segment only. We present a slightly different typology based on the fifty secondhand initiatives we identified: partnership, acquisition, peer-to-peer secondhand platform, integrated secondhand platform and physical secondhand corner. In the peer-to-peer platform, the products transit directly between the secondhand buyer and the secondhand seller, while there is a process of centralization of the products by the brand in the integrated platform. The integrated platform requires a secondhand supply chain.

2. **Third party involvment**: data mining started in the e-commerce with digitally born actors (Keunyoung, 2020). In this context, digital actors specialized in second hand such as Vestiaire Collective or Reflaunt tend to be more efficient regarding data collection and data analysis than traditional players. Among the fifty secondhand initiatives, we looked at whether the firsthand actors paired with a digital and specialized actor in order to build their secondhand service.

The third level of characteristics analyzes the fashion and luxury products sold in the frame of those secondhand initiatives, and the strategies associated to the products' offer taken by the firsthand actors.

C. **Product**:

1. **Type**: fashion is a "cross sector" that encompasses several industries, such as apparel, footwear, leather or jewelry (Brun et al., 2008). Thus, we divided the products concerned by the secondhand initiatives into five different types: ready-to-wear (RTW), accessories, shoes, hard luxury which includes jewelry, and sportswear.

2. **Range of product**: as E.S Rolbina highlights in her article (2016), a retail trade networks aims at offering the widest possible range of products so the customers can find all the goods they need in one place. In our research, this applies in particular to the department stores and retail chains that offer diverse types of products from RTW, accessories, shoes, jewelry. On the other side, Rolbina develops the idea that a more specialized product range based on customer value has its own advantages such as the reduction of inventory levels or the increase of the turnover. In our context, the product range strategy does not apply only to physical stores but to all the mentioned actors. In this context, we specified whether the firsthand actors chose a "generic" product range strategy with a diversification of their products, or a "specialized" product range strategy focused on one or a very few types of products.

The fourth level of our framework is based on the data collected, analyzed and shared during the implementation of secondhand services by firsthand actors.

D. **Data mining**:

1. **Type of service**: Coxon distinguishes between data collection and data analysis as two different steps of sorting data (Coxon, 1999). We also used this dichotomy to analyze data mining from the implementation of the secondhand services. We specified whether data were only collected or both collected and analyzed. To obtain those information, we interviewed four actors engaged in second hand services implementation. As we could not interview all the stakeholders of the fifty initiatives, we used the variable "non available" if this characteristic remained unknown.

2. **Data object**: data can be split into three main pillars: sales data, product data and consumer data (Keunyoung, 2020). Thus, we questioned which types of data among those three pillars were analyzed through the secondhand initiatives counted. As the previous characteristic, we used the variable "non available" if we did not have access to this information.

The secondhand framework analysis schema called SecondHand Initiatives' Characteristics is presented in Figure 1.

In terms of methodology, a sample of fifty secondhand initiatives was collected using key words (*second hand, resale, brands, retailers, data*) on search engines of two main media of the fashion and luxury industry (Business of Fashion and WGSN). This observation period started on October 15th, 2020 and ended on May 15th, 2021. Overall, we studied 49 actors of the fashion industry : Abercrombie & Fitch, Adidas, Aigle, Alexander McQueen, Amélie Pichard, American Eagle, Auchan, Audemars Piguet, Ba&sh, Balenciaga, Balzac Paris, Ben Baller, Bocage, Burberry, By Far, C&A, Claudie Pierlot, COS, Cyrillus, Eileen Fisher, Farfetch, Gap, Gucci, H&M, Isabel Marant, JOSEPH, Kaporal, Kiabi, La Redoute, Levi's, Lululemon, Madewell, Maison Cléo, Maje, Mark Cross, Mulberry, My Theresa, Neiman Marcus, Nordstrom, Okaidi, Patagonia, REI, Richemont, Sandro, Selfridges, Sézane, Sneakerboy, Stella McCartney and Zalando.

This kind of approach proves to be useful in the context of an exploratory research while being flexible and allowing in-depth study of complex phenomena (Yin, 2009). In this case, the development process of new secondhand services shows a high level of details and is moreover influenced by a lot of characteristics. Thus, using a classic quantitative approach for this paper would lead to a significant simplification and seems inappropriate. In addition, the development processes of new services in the luxury industry are strategic and implemented with confidentiality.

Nevertheless, all the qualitative research methods are not well appropriate to answer this paper's objectives. To that extent, a case study or a multi-case study are qualitative approaches of empirical research that allow in-depth study of a complex social phenomenon, a group or a collection of individuals non-randomly selected in order to precisely describe this phenomenon and interpret it while considering the context in which it takes place (Yin, 2009). However, case studies are appropriate when the phenomenon already exists and must be considered and deepened within its daily context (Yin, 2009). In our paper, only one case study will be presented for purpose of illustration, but our methodological approach is not based on case studies. Furthermore, case studies do not allow interaction with the observed stakeholders.

To identify some trends and characteristics from our observed phenomenon, we built a database compiling 750 data, by applicating our nine key characteristics to each of the fifty initiatives.
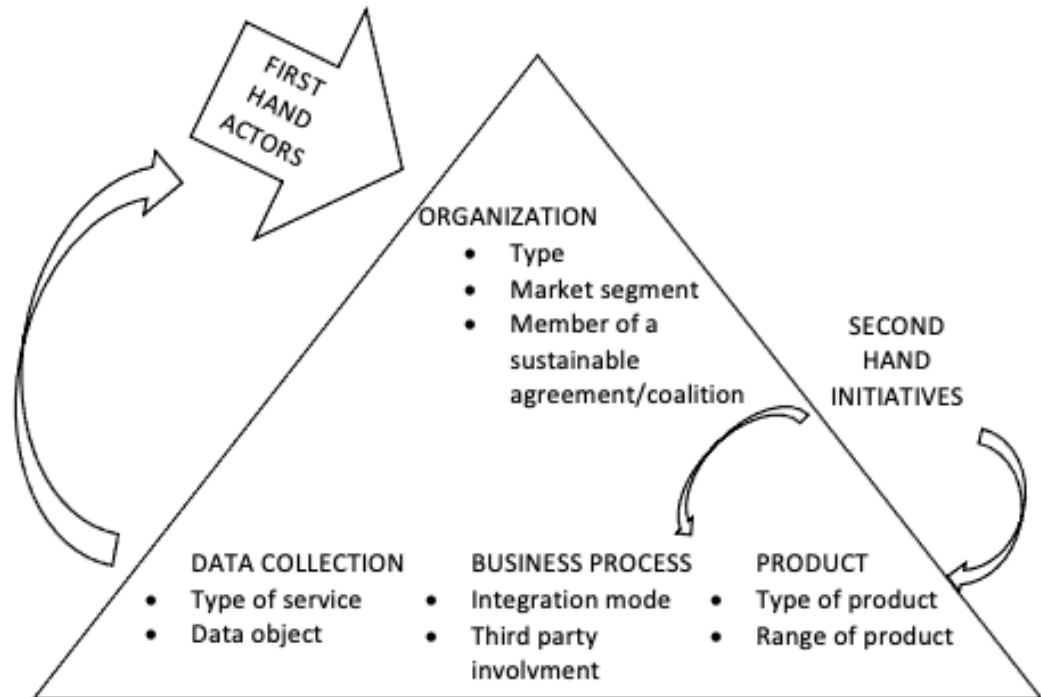

Figure 1: Analysis framework of SecondHand Initiatives' Characteristics

Case study : Ba&sh RESELL and its characteristics

This case study aims at illustrating the secondhand initiatives' sample by presenting a concrete example and giving the corresponding characteristics from our analysis framework.

In 2021, Ba&sh launched its service RESELL for its clients. The service is accessible from the clients' Ba&sh account and allows to resell in a few steps:

1) As a Ba&sh client, a virtual dressing composed of your previous purchases allows you to put on sale one or few of your items by using the RESELL button. The item is already authenticated and owns a certificate of identity which goes along during the resell process and is available for its next owner.

2) The item is then put on sale on different marketplaces simultaneously.

3) Once the item is bought, the owner receives a packing slip to ship the item to its future owner.

4) Once the secondhand buyer receives the item and confirms its state, the money is transferred to the seller who can choose a bank transfer or a voucher to use on Ba&sh.com.

As there is no interference of the brand during the process of resale, this platform is considered to be peer-to-peer. This service has been constructed by the brand in partnership with Reflaunt, specialized in secondhand services and data mining; and Arianee, specialized in blockchains.

In the corresponding analysis framework presented on section 2., here are the characteristics of the Ba&sh RESELL platform initiative:

A.1. Organization type: Brand

A.2. Market segment: Affordable luxury

A.3. Member of a sustainable agreement or coalition: No

B.1. Secondhand integration mode: Peer-to-peer platform

B. 2. Third party involvement: Reflaunt and Arianee

C. 1. Product type: RTW ; shoes ; accessories

C. 2. Range of products: Generic

D. 1. Type of service: Data collection ; Data analysis

D. 2. Data object: Sales data ; product data ; customer data
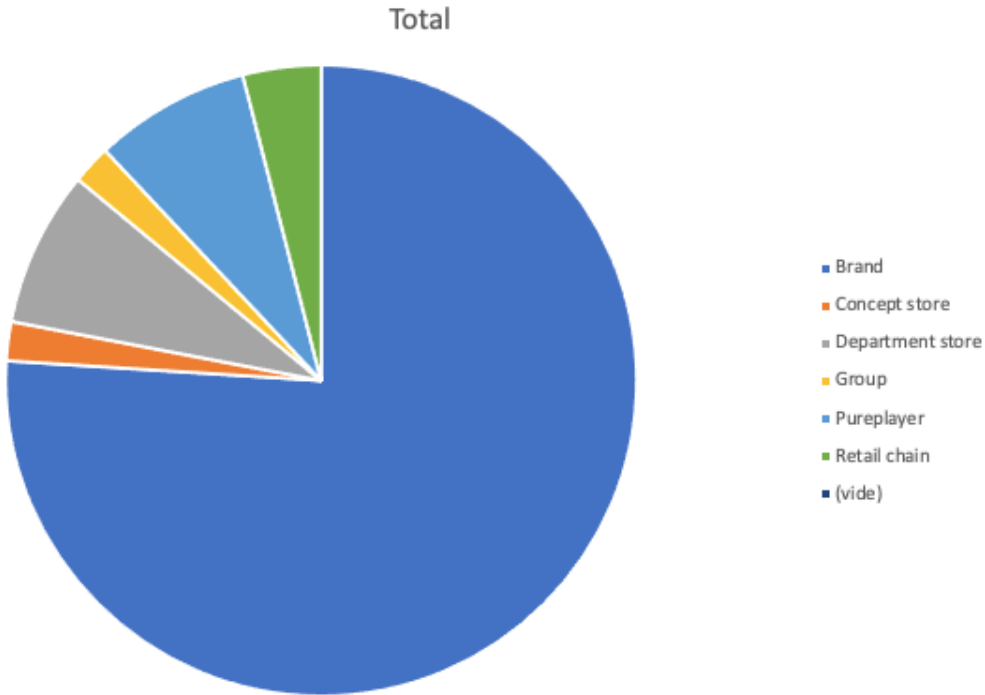
Section 3 Analysis framework review

Figure 2: Part of organizations' types in the implementation of second hand business processes

The first observation is that over fifty initiatives counted, 38 are coming from fashion and luxury brands, which are followed by pure players and department stores as the most present categories of firsthand organizations going to secondhand retailing market. There is a significant presence of brands in the implementation of secondhand initiatives. As Kerli Kant Hvass highlighted, fashion brands going to the secondhand retailing market is a new phenomenon so their preponderance among the traditional players is noticeable.

Total

Legend:
- Acquisition
- Integrated 2nd hand platform
- Partnership
- Peer-to-peer 2nd hand platform
- Physical 2nd hand corner
- (vide)
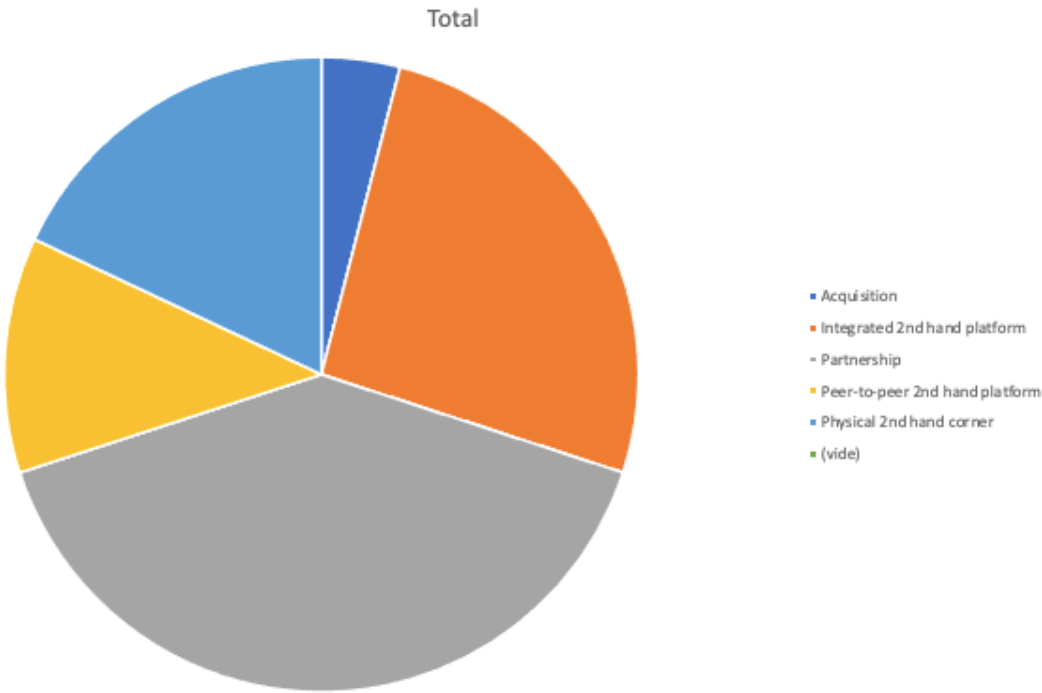
Figure 3: Part of second hand's integration modes among the fifty initiatives

Among the fifty initiatives collected, there is a strong preponderance of partnerships with existing secondhand digital actors. The second preferred integration mode for implementing second hand is the integrated secondhand platform, followed by the peer-to-peer secondhand platform. Those three types of integration modes are all digitalized. The only type of physical secondhand initiative is the secondhand corner, which represents only 18% of the initiatives. It highlights the fact that digitalization is ubiquitous in the rise of second hand's initiatives by traditional players.
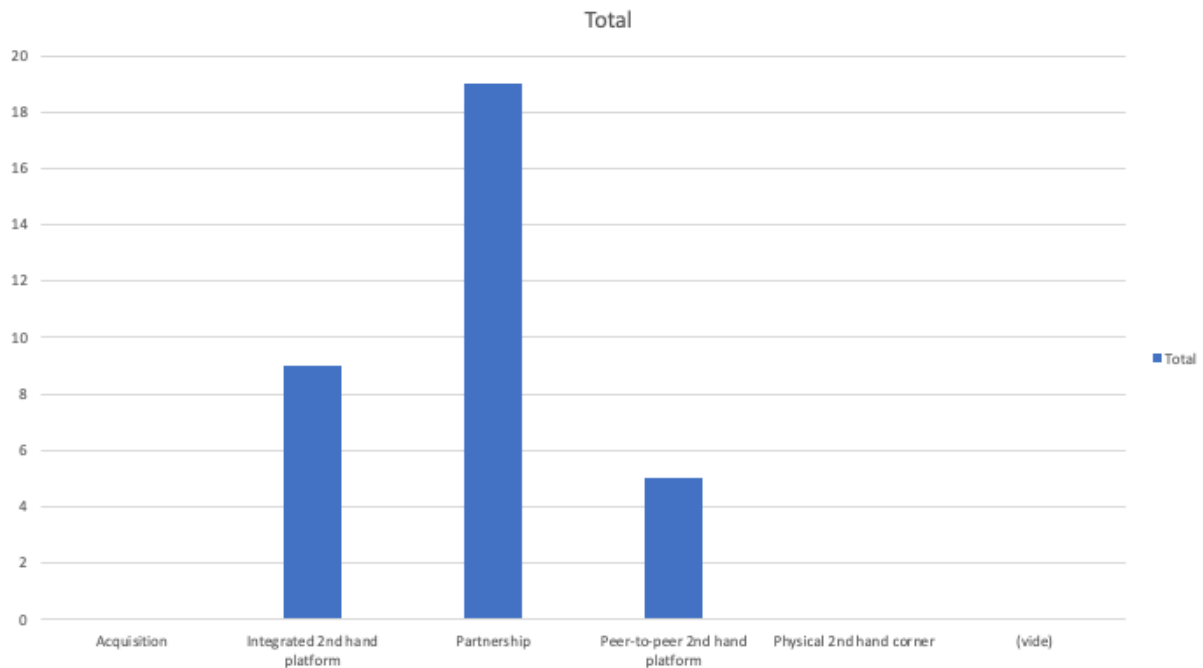
Figure 4: Number of initiatives involving a third party depending on the integration modes of the second hand business processes

The second significant observation is that over fifty initiatives, at least 33 involve a third party in the development process of the secondhand initiative. As the figure 4 shows, partnerships count for a large part of those initiatives since it they are conceived between two parties. However, almost a third of the initiatives involving a third party are integrated secondhand platforms that belong to brands. It highlights the fact that traditional players need a third-party actor to endorse their secondhand service: building and managing the back office and the supply chain of a new service, while collecting and analyzing the data extracted along this process. This is in accordance with what Keunyoung (2020) develops in his article: digitally born actors have a stronger expertise in collecting and analyzing data, and thus can be a real support for brands implementing their secondhand service.
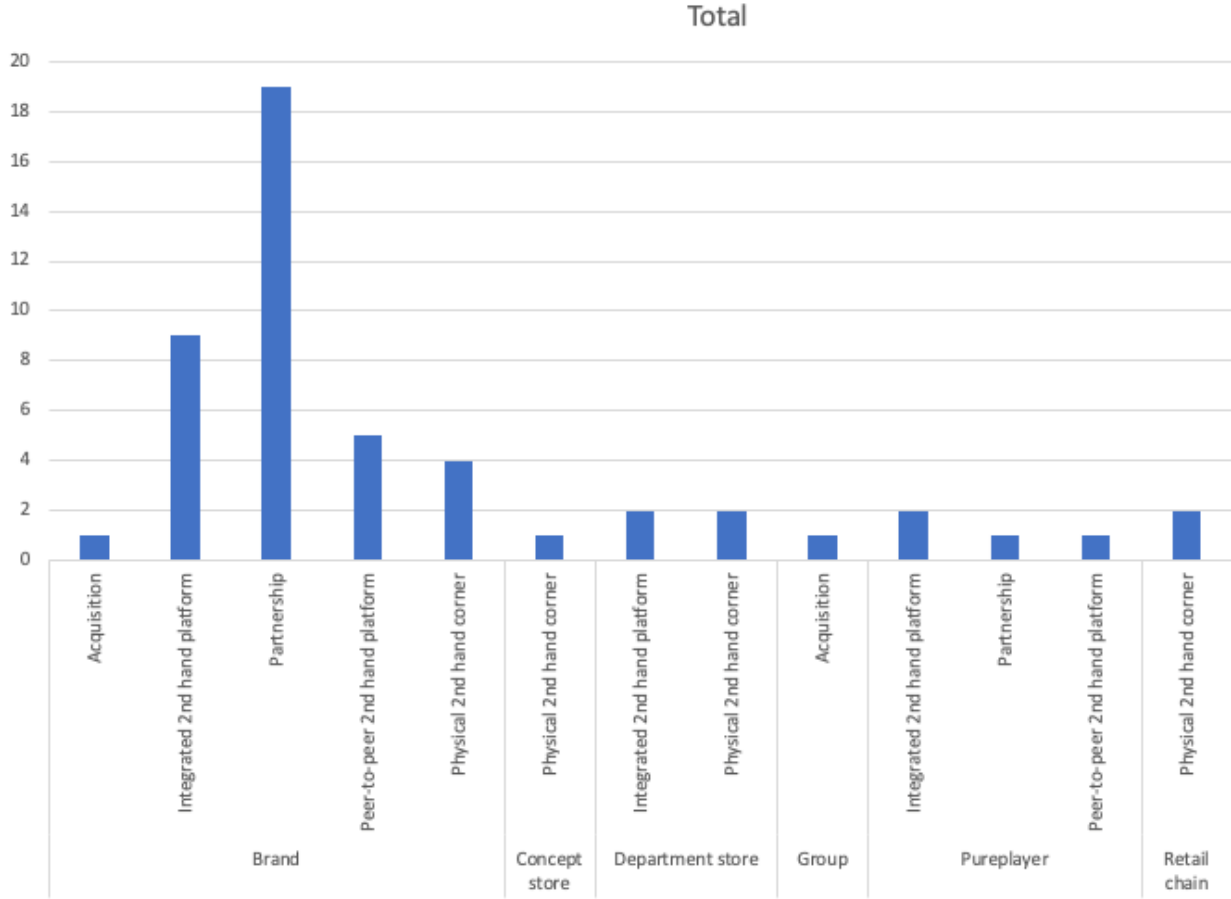
Figure 5 : Part of second hand integration modes per type of organization

Figure 5 crosses the integration modes of secondhand business processes with the different organization types. It appears that brands have the most diversified integration modes compared to the other categories of firsthand actors, with a preponderance of partnerships. In terms of variety of integration modes, brands are followed by pure players and department stores, the same categories of firsthand actors that are the most active on Figure 2.
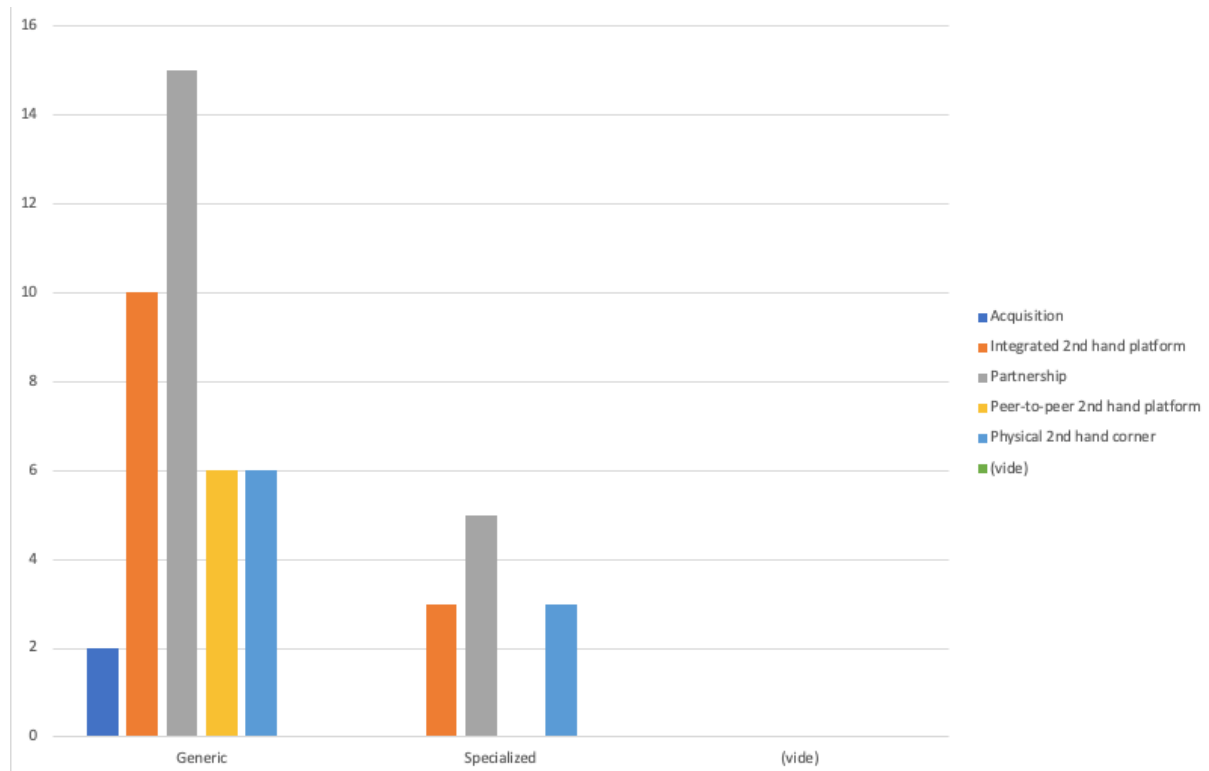
Figure 6: Part of secondhand integration modes per ranges of products

Figure 6 shows the proportion of secondhand integration modes per types of range of products: generic range of products or specialized range of products. It appears that actors offering a generic, diverse range of products implement secondhand services in more diversified ways than the actors offering a specialized range of products. Those last ones focus on partnerships with existing secondhand actors, integrated secondhand platforms but also physical secondhand corner, in particular in specialized concept stores.
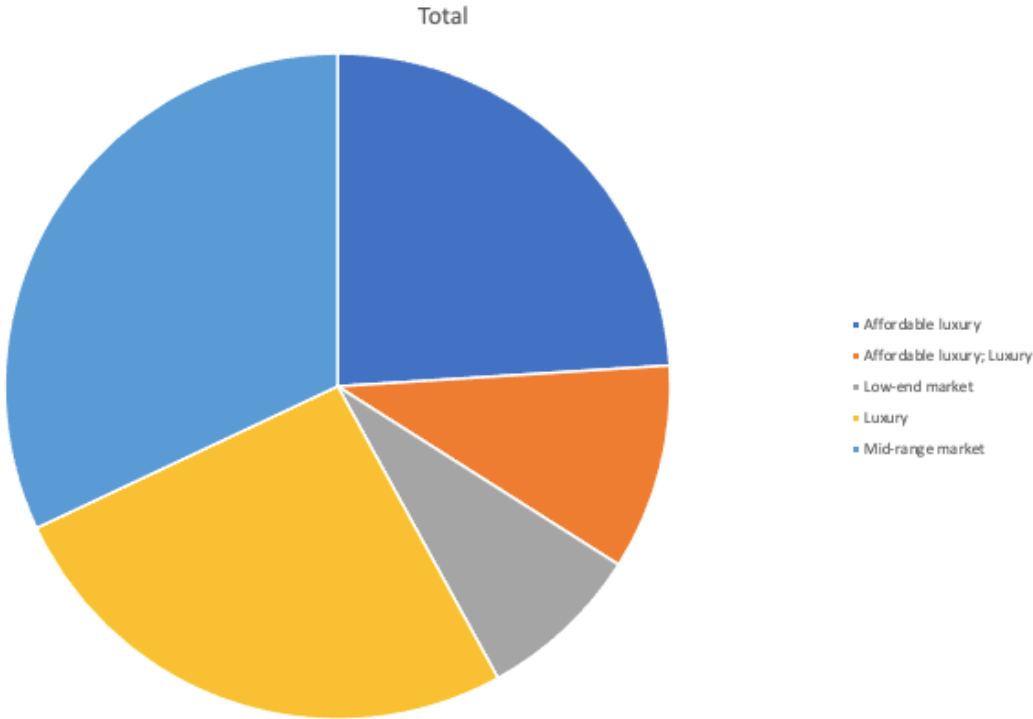
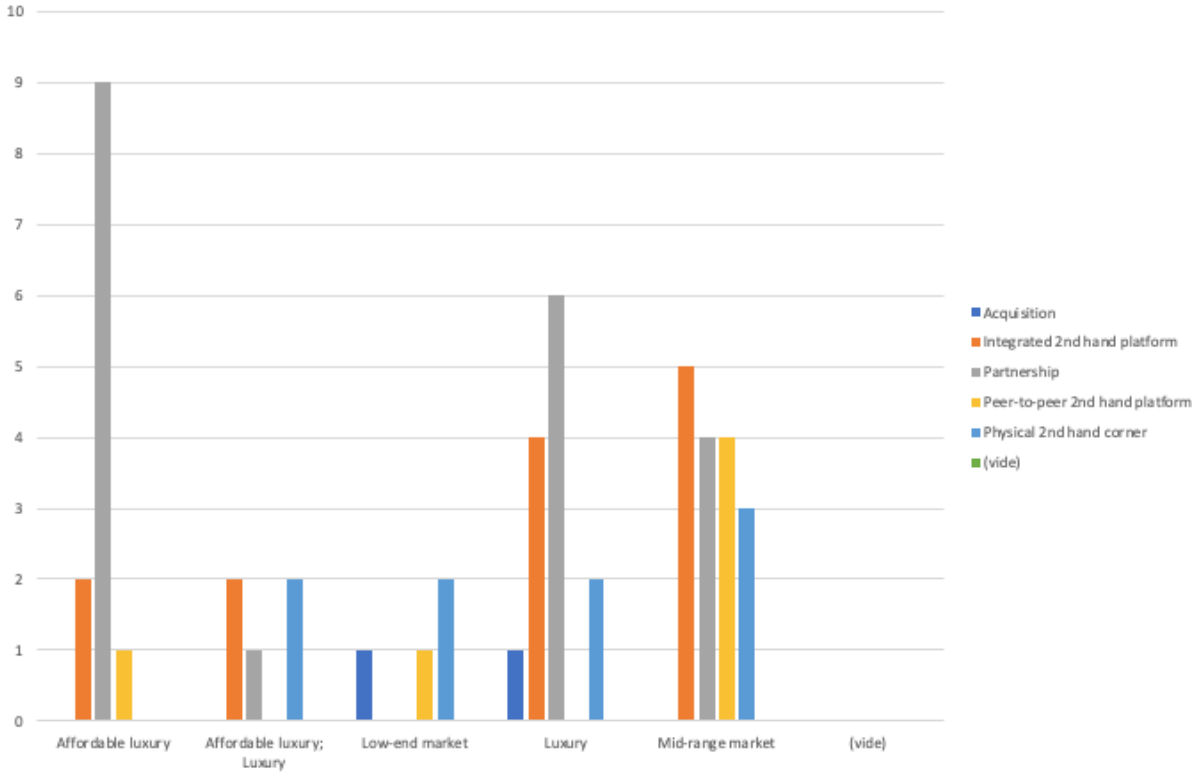Figure 7: Part of the market segments among the 50 initiatives of the sample

Figure 7 bis: Second hand integration modes per type of market segment

As figure 7 highlights that the part of the different market segments of the fashion industry in our sample is balanced, figure 7 bis shows how those market segments implement secondhand services in terms of integration modes. It appears clearly that in the segment of affordable luxury, actors mainly develop partnerships with existing secondhand platforms such as Vestiaire Collective or The Real Real and use very few of the other integration modes. In the luxury segment, there is also a preponderance of partnerships but concomitantly, we observe a noticeable expansion of integrated secondhand platforms.

The mid-range market is the most diversified and balanced in terms of integration modes implementation (using alternatively integrated platforms, peer-to-peer platforms, partnerships, and physical secondhand corners), with a slightly higher presence of integrated secondhand platforms.
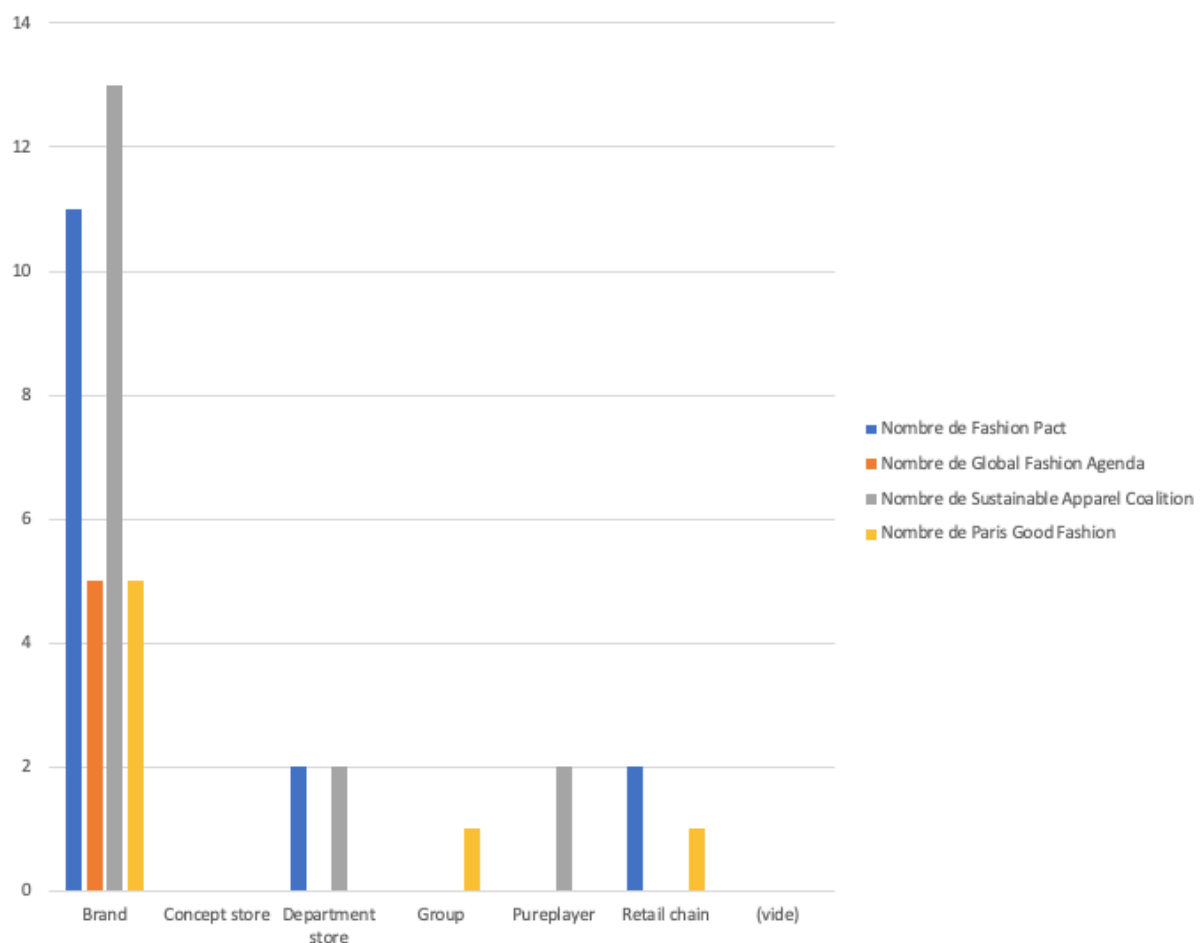

Figure 8: Number of sustainable coalitions' memberships per type of organization

Figure 8 focuses on the sustainable engagement of the organizations by measuring their membership to the main sustainable agreements or coalitions of the fashion industry. Brands have the higher and more diversified sustainable engagement, and this can be explained by the fact that on our database, 7 of the 38 studied brands are members of at least 2 or more sustainable initiatives, simultaneously. Gucci is for example member of the 4 sustainable coalitions mentioned, as it belongs to the Kering group.
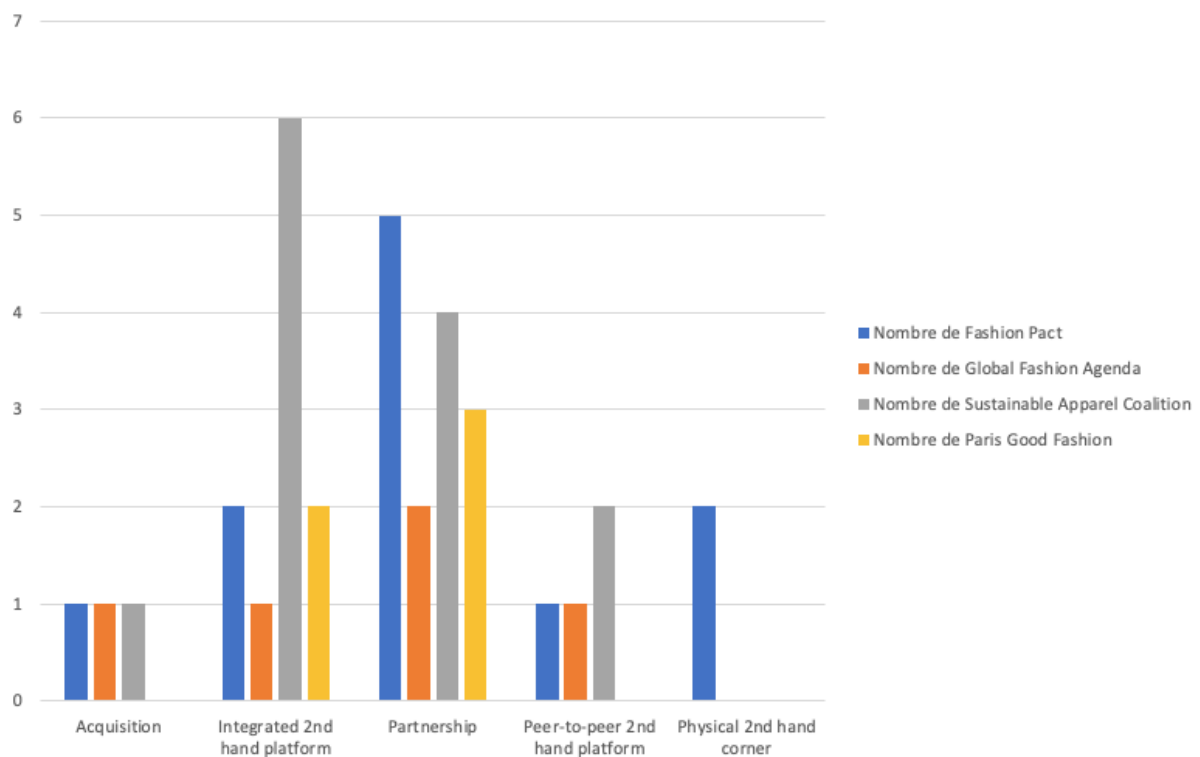

Figure 9: Number of sustainable coalitions' memberships per second hand integration modes among brands' initiatives

Figure 9 focuses on brands and crosses the secondhand integration modes with the sustainable engagement. The first observation is that among the integrated secondhand platforms, the majority is coming from firsthand actors that are members of the Sustainable Apparel Coalition. This coalition has a strong presence in the United States of America, as Walmart and Patagonia are two of its pioneer members (Schwartz, 2011). Concerning partnerships, they are mainly driven by both members of the SAC and members of the Fashion Pact, a younger coalition specially involved in Europe since it was implemented by the Kering

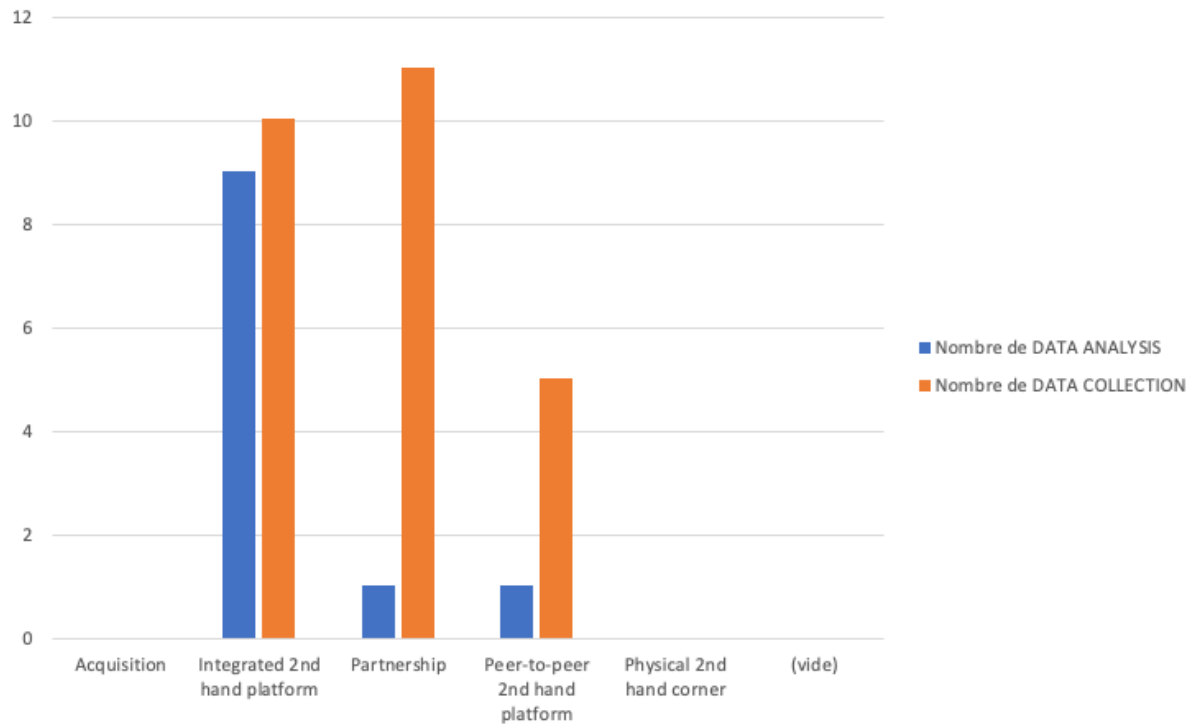group. Moreover, the coalition the least represented in the secondhand initiatives is Paris Good Fashion.

Figure 10: Part of data collection and data analysis per secondhand integration mode

It appears that integrated secondhand platforms both collect and analyze data since they are intertwined with the firsthand offer of the actor. In the case of partnerships, data are collected and analyzed by the partner, but they are hardly shared to the traditional player. The only type of data that might be shared to the firsthand actor is sales data during the period of the partnership. Peer-to-peer platforms start collecting data but show a lack of expertise regarding data analysis.
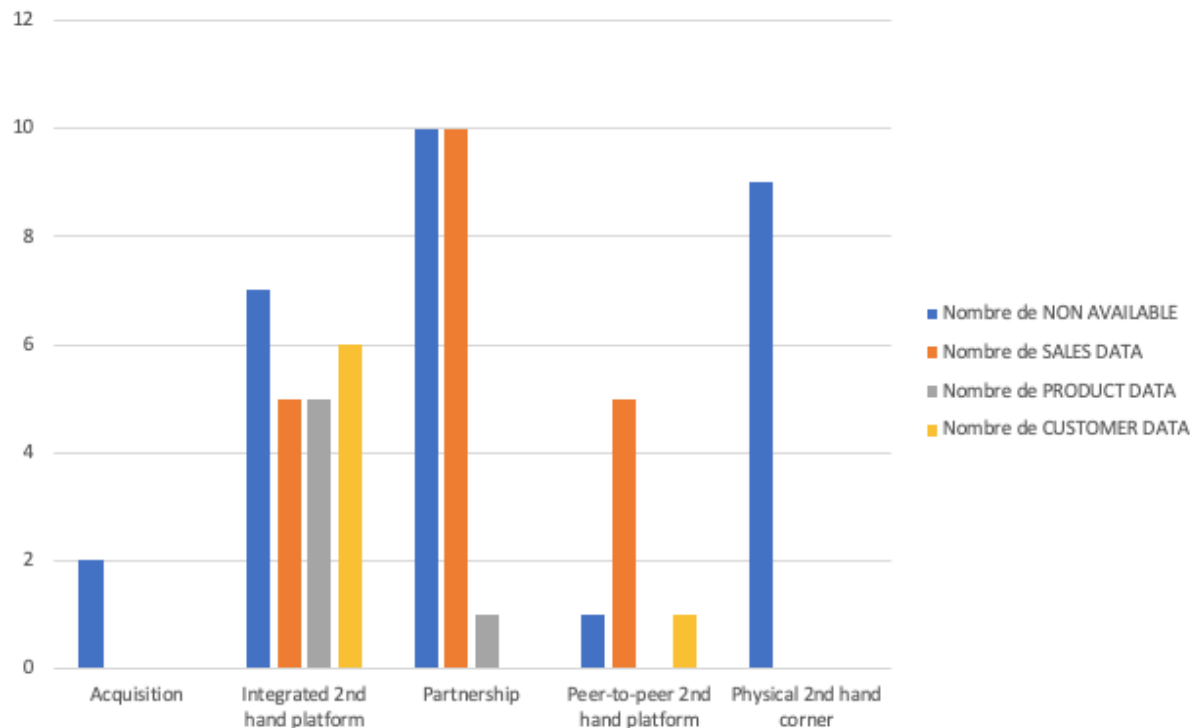
Figure 11: Objects of data proceed per second hand integration modes

As data mining appears to be a motivational factor behind the implementation of secondhand initiatives, figure 11 shows that yet the information regarding collection and analysis of data is often non available and non-shared. However, the few insights we had through interviews showed that integrated secondhand platforms have the most elaborated expertise regarding data sorting, which is accomplished by the third party building the secondhand service. Regarding partnerships, data mining is complex because the secondhand initiative is offered by another entity. Thus, in the secondhand process, data belong to the partner (Vestiaire Collective, The Real Real, Thred Up…). This explains why the type of data that can be shared is mainly data regarding the actual sales of the brands in the frame of a partnership. More detailed data often remained confidential. Peer-to-peer platforms easily analyze sales data while they are not yet processing data about customers and products.

Discussion

Overall, it appears that fashion and luxury brands are the actors the most undertaking towards the secondhand market among the traditional players. However, fashion and luxury brands

need the involvement of a third party specialized in second hand or digital in order to build their secondhand service. This leads to the development of new actors offering a new business model based on implementing secondhand services for traditional players and analyzing data along the resale process. In the initiatives collected, those third parties are in particular Reflaunt, Trove, Disruptual, Faume. Regarding the market segments, the middle-range segment of the fashion industry appears being the most diversified in terms of secondhand integration modes. The luxury and affordable luxury segments prefer partnering with second hand established actors having a luxury expertise such as Vestiaire Collective or The Real Real. Moreover, the large majority of the actors studied are members of one or few of the main sustainable coalitions in the fashion and luxury industry: the Fashion Pact, the Sustainable Apparel Coalition, Paris Good Fashion and the Global Fashion Agenda. This highlights the fact that implementing secondhand initiatives takes place in broader context of evolving towards more sustainability by participating to the circular economy.

Concerning the data mining aspect of the secondhand implementation, the process of collecting and analyzing data remains nebulous, as figure 11 shows, there is a preponderance of "non available" information regarding the analysis of data during the resale process. Nevertheless, when the resale data are collected and analyzed, different purposes lie behind the data analysis process. As the different objects of data we presented: customer data, product data, sales data; data can serve those three pillars. Keunyoung (2020) shows how the analysis of data can boost a brand's sales. As it was highlighted in the interviews, the main purpose behind customer data collection and analysis is both strengthening the loyalty of the existing customers but at the same time recruiting new customers. Implementing a secondhand service for a brand can drive their second hand customers to a firsthand purchase (BCG, 2019). During the interviews, the stakeholders mentioned that the data related to the product could help improving the product quality and sustainability by observing the product lifecycle in the secondhand channel. Data analyzed through the secondhand processes could thus also participate in increasing the sustainable engagement or offer of the firsthand actors. Moreover, it appears that the ways of implementing second hand are mostly digital, as the figure 4 shows. Digitalization seems to be a key in the development of second hand's initiatives. In that sense, the future of data collection and data analysis along the resale process could rely on new technological tools such as the AI. This could extend opportunities

for new business models such as the third parties presented in our research that position themselves between digital technologies, data analysis and second hand.

Limitations

Eventually, this research contains some limits that are worth highlighting: the initiatives studied were collected in two main fashion media of the industry, both English speaking. It was not possible to study the fashion press in all geographic areas. It would have been interesting to include more foreign fashion papers such as TextilWirtschaft in Germany or other sources in other geographic areas and other languages, for example in the Asian fashion press. Moreover, the stakeholders interviewed were mainly from the third parties mentioned or existing secondhand actors. It would have been a great insight to interview more stakeholders directly from firsthand actors such as fashion and luxury brands or retailers. It would have also been interesting to interview stakeholders from well-integrated and forerunner secondhand platforms such as Patagonia's Worn Wear or Eileen Fisher's Renew. In addition, collecting information about strategic initiatives of fashion and luxury actors, such as the implementation of a second hand offer or service, remains difficult as it includes confidential information.

Perspectives

However, the significant multiplication of secondhand initiatives implies new opportunities for the research field. Few subjects of research could be introduced and developed around the implementation of second hand initiatives by first hand actors : how implementing and optimizing those initiatives according to the characteristics of the first hand actors or what are the consumer perceptions following those initiatives. There could be also research studies about the new business models created in the frame of those initiatives.

This paper aimed at studying objectively the dynamics between the firsthand actors and the secondhand market in fashion. However, regarding the multiplication of those initiatives, there could be an important subject around the motivational factors of those initiatives perhaps leading in some cases to greenwashing. Some further qualitative and quantitative researches could be relevant to investigate motivational and success key factors in

implementing this pillar of circular economy where product should circulate as long as possible.

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