Personality Traits and Business Intelligence: A Model to Improve Direct Selling Systems

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Abstract— **Direct selling is a business model that presents opportunities for personal, professional and economic development for all those people who wish to obtain income through the generation of their own business, based on the formation of sales networks. For that reason, direct sellers have objectives that transcend the sales activities themselves, such as establishing sustainable interpersonal relationships with their clients in the medium and long term and being able to run their own business.**

In this work, we study personality traits and personal profiles of sellers who operate under this modality through the DISC test, studying the twelve main combinations. These results are subjected to statistical analysis and then incorporated into a business intelligence platform which contains traditional data such as sales, billing, personal data and seniority.

The results, in the first place, validate those desirable traits for a traditional seller, referenced in the bibliography, such as kindness and persuasiveness. Nevertheless, this research highlight other personality traits that contribute to the success of the direct sellers and that are especially desirable for this business, for example, long-term reliability, self-motivation, proactivity and the ability to make decisions under pressure. The incorporation of this type of data supposes an added value for the management of direct selling businesses. Besides, the integration with business intelligence platform contributes to the efficiency of the information management.

Keywords-Direct Selling; DISC; Personality traits, Business Intelligence; Decision Support Systems

I. INTRODUCTION

The business world is a complex area that has undergone deep and uninterrupted since the last century. One of the major causes of this phenomenon is undoubtedly the dizzying technological revolution that has taken place for at least 50 years. In particular, these changes have been accentuated by the implementation of Information and Communication Technologies (ICT) in business processes [1]. This has resulted in a dynamic and highly competitive environment that significantly impacts markets, demand, customer preferences, products, processes and the legal framework, among other elements. In this sense, organizations have had to adapt to changes and market variations that are increasingly demanding, based on new competitive strategies and business innovations to take advantage of the opportunities that are generated [2]. Such is the case of direct selling companies that, as a result of technological changes, have redefined their strategies, as well as the structure of their businesses [3].

The history of direct selling as it is currently known that goes back to the beginning of the exchange of goods and services as part of human activity [4]. It was not until 1984 that Baker introduced a first definition, which defined direct selling as a sale system without shops, wholesale or intermediaries between the seller and the consumer [5]. In the '90s, one of the definitions that generated more acceptance in the community was the one introduced by Peterson & Wotruba, who have defined it as a sales model that necessarily implies interpersonal relationships (usually face-to-face), which are produced outside a trade or shop and in which the usual intermediaries in the supply chain have no participation [6]. At present, the leading organization that encompasses the direct selling industry worldwide is the World Federation of Direct Selling Associations (WFDSA) [7]. In addition, at the regional and national level, the leading companies are the Direct Selling Association (DSA) of the United States [8] and The European Direct Selling Association (SELDIA) at the European level stand out [9]. These organizations have extended the concept, encompassing not only retail but the opportunity for sellers to generate an own business that allows them to grow and develop personally, professionally and economically.

Nowadays companies that operate with this modality show high growth rates in the last decades [10]. This increasing is based on sales networks, whose members establish strong interpersonal relationships with the company, its customers and other sellers in the system. In this sense,

there are personality traits that are especially desirable in people who work in sales, such as motivation, kindness and state of consciousness, key factors to achieve high levels of performance [11]. There are several studies based on how personality traits affect the performance of people in work situations, as is the case of those dedicated to sales and commercial activities [12]. For this reason, sellers who work in direct selling systems have objectives that go beyond the sales activities themselves, such as being able to establish sustainable interpersonal relationships in the medium and long term with their clients and being able to run their own business, with all that it implies.

There are several methods to identify personality traits. In particular, there are especially useful tests aimed at knowing the personal profile of individuals. One of the most used techniques is based on the DISC methodology, created by Marston in 1928 [13]. In his book, Marston proposes a model based on four "principal emotions" that are present in the individual's behaviour. These four factors are D (Dominance), I (Influence), S (Stability) and C (Compliance). Fig. 1 shows the DISC matrix, drawn up by the consulting company Everything Disc [14].

The values of each letter are obtained by an algorithm that relates the answers of a lengthy questionnaire, and that requires a high degree of concentration and sincerity in the person who answers it. Finally, the results of the test show a personality style that combines two letters: the first letter means the predominant factor and the second letter represent the letter with less weight (e.g. DC). These combinations of letters are usually called "basic combinations" and have a series of characteristics and attributes that distinguish the individual with that profile [15]. The DISC methodology has gained particular importance since the 90s, where the study of personality acquires a key role in research in the fields of psychology, personality and behaviour. In the 21st century, Cervone and Pervin assure that there is a set of characteristics that differentiate us from others as human beings [16].
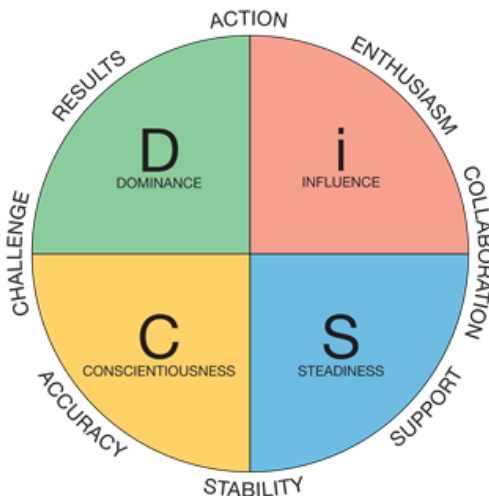

Figure 1.   DISC matrix. Source: Everything DISC.

In 2004, Watson and Klassen describe how this methodology contributes to many organizational activities such as effective communication, recruitment and selection and the development of the sales force [17]. By the way, these authors have developed a tool validation for the DISC test. Furthermore, Professor Larry Price of Texas State University designed in 2015 another tool validation that is one of the most accepted in the community [18]. Its principal applications are in talent management (mainly in work situations), but there are also experiences applying the DISC methodology in students, teachers and medical practices [19]. For example, the work carried out by Suárez-Álvarez & Pedrosa in 2016 studied entrepreneurial personality as a determining factor of professional success. In 2017 Gil Gaytan & Nuñez Partido described personality traits that affect positively the ability to export from Mexican entrepreneurs based on the DISC test [20].

In this work, we take as input the result of the DISC test carried out to direct sellers. These results are consolidated in a database and integrated into Business Intelligence (BI) platform [21], which contains traditional data on sales, billing, seniority, etc. The result of this research is a first experience of integrating data related to the personality of sellers who work in direct sales systems and contributes to improving the management of information and knowledge in that sector [22].

II.   Results

The DISC test was carried out on a total of 178 direct sellers in a 10-year time evolution (2008-2017). Each seller has different levels of sales, billing, seniority, and run his own sales team which works under his command. The results of the test have been structured and integrated into a BI platform through a system of relational databases. All other data were already embedded in the BI platform environment, such as customer ID, quantities sold and monthly invoicing, geographic region of influence, etc. Three Balance Score Cards (BSC) have been designed that relate the results obtained from the DISC test with the other data that the company already had in the platform. Fig. 2 shows one of them, which has been developed to summarize the proportions of each profile that make up the whole sales force, its geographical distribution and the time evolution of sales and billing, according to each BC. Besides, we have defined key performance indicators (KPI) aligned with the needs of the business. In this way, the elaboration of the BSC contributes and supports to the monitoring and strategic planning of the sales force portfolio based on efficient information management.

Fig. 3 shows a detail of the BSC, emphasizing on the proportion of each DISC profile in the total studied sample. It is observed that 50% of the sellers are represented by 3 BC only. On the other hand, 46.6% is explained by profiles where high Influence predominates (I). This has particular relevance considering that the bibliography above highlights characteristics such as kindness and persuasion (typical of a profile with high I) as critical features for the successful development of a traditional salesperson. In this way, it is not surprising that a high percentage of the people involved
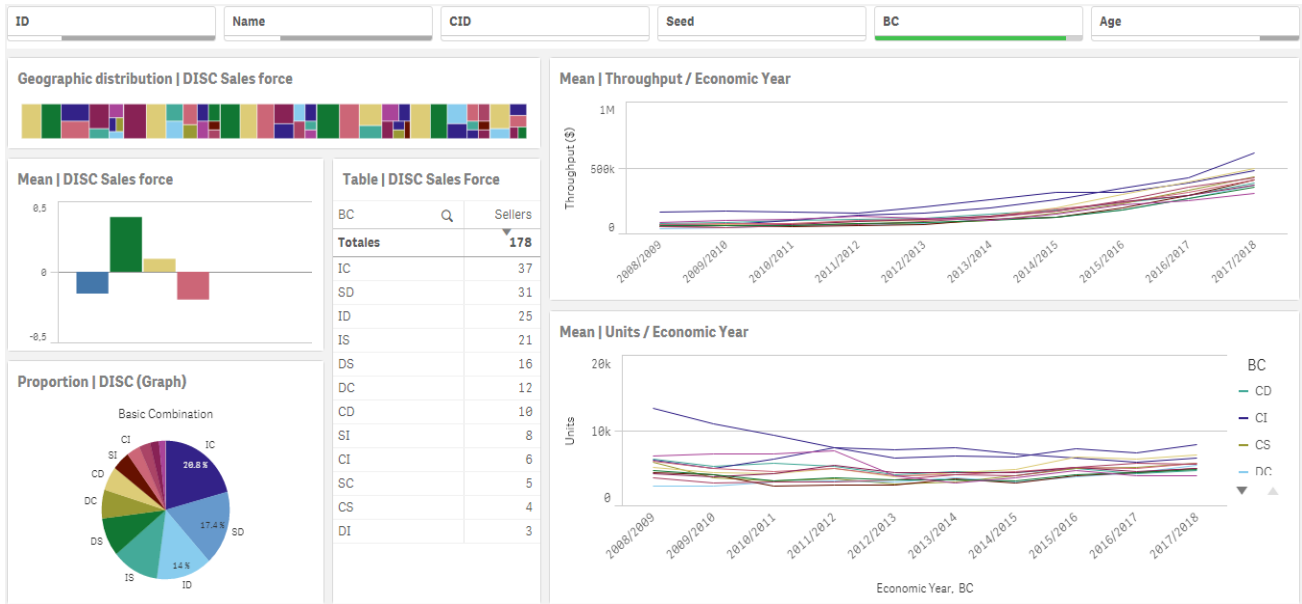
Figure 2.   BSC for sales force management (including DISC profile).

in the network respond to the ID, IC and IS profiles.

Nevertheless, analysing the data in depth, it is observed that the profiles that reach higher average yields are not necessarily those where the I factor predominates. Fig. 4 shows the average sales of units by each BC, where it is evidenced that in the last ten years profiles with higher sales levels have been CI and DS.

The CI profile is associated with the accuracy and low tolerance to make mistakes. People with this profile tend to be extremely meticulous and have a low-risk aversion. In essence, CI profile is likely to adhere to rules and procedures and also to make decisions in situations with low uncertainty. For its part, the DS profile is related with self-motivation. People with these personality traits tend to be proactive, decisive and impatient to achieve their goals.

To summarize, there are personality traits in direct sellers that increase the success in direct selling systems that transcend the characteristics and features desired by a traditional seller. It is important to note that this phenomenon is also true analysing other variables, such as billing and rate of generation and incorporation of new direct sellers into the network.

III.   CONCLUSION AND FUTURE RESEARCH

A.   Conclusions

In this work has been made the integration of traditional data of sellers who work in business models with direct selling system with data related to their personality traits and personal profile. This integration was made in a business intelligence platform, and we have also defined metrics and KPIs to contribute to efficient information management. Besides, the platform used is dynamic and interactive, which allows the user or analyst to deepen, emphasize or search for relationships and patterns without the need to export information to a static spreadsheet.

On the other hand, those profiles that generate more income in the system have been identified, as in the case of the IC and DS profiles. This can be partly explained by the fact that there is a large number of people with that profile and consequently a critical mass of billing is generated. People with high Influence (I) reflect the traits exposed as desirable for a seller according to the bibliography. This is evident since more than 45% of the sample studied to respond to a profile of these characteristics; likewise, these direct sellers have sales and billing returns above the average. Even so, the evidence shows that there are other profiles that present successful outcomes (even better). For example, the adherence to the norms and rules typical of people with high C is a factor that encourages performance in sales and billing. In particular, the success factor of people with CI profile could be the reliability they transmit
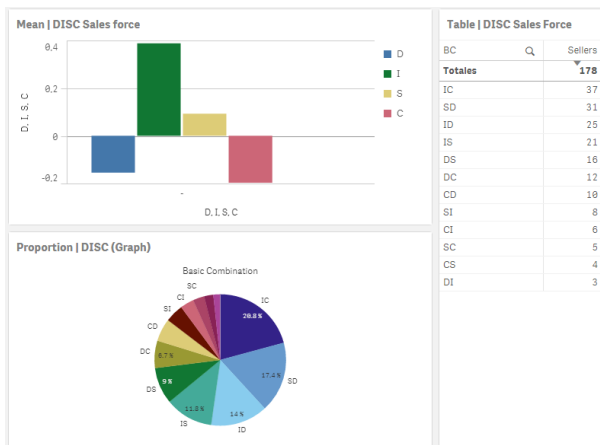

Figure 3.   Proportion of each DISC profile in the Sales force.
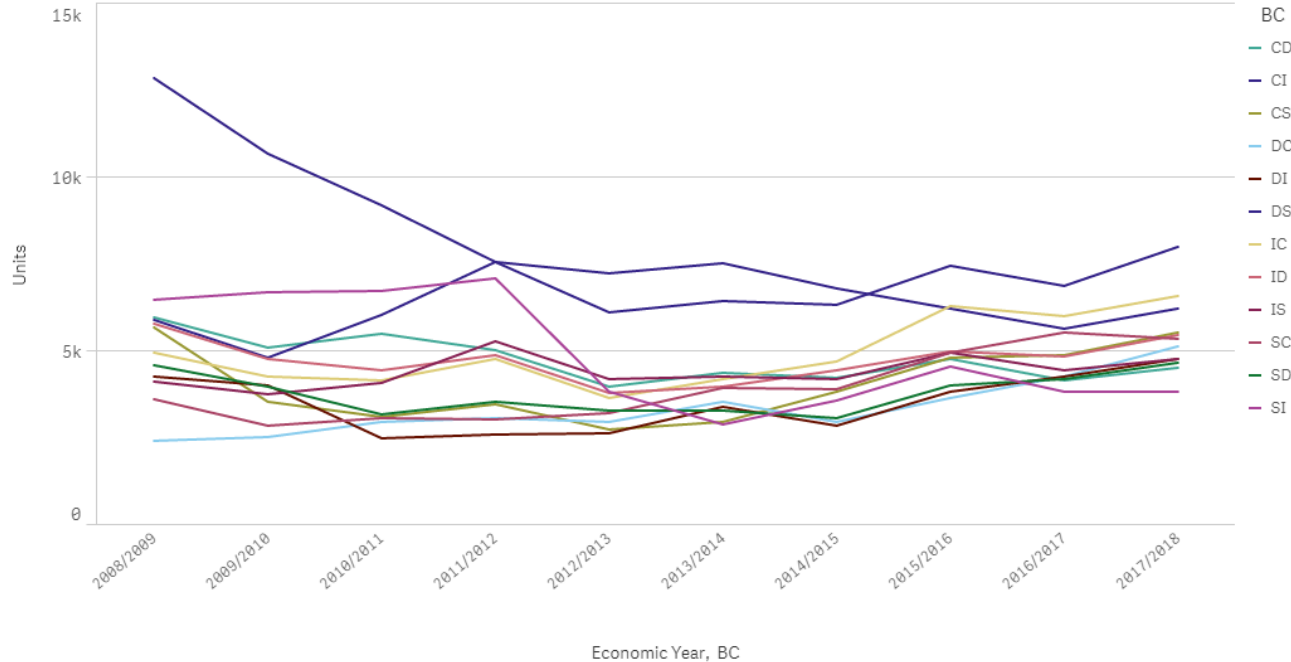
Mean | Units / Economic Year

Figure 4. Sales (mean) of each DISC profile.

to the customer at the time of purchase; what is a critical issue in recurrent direct sales business since the sector is based on loyalty and the medium-long term relationship with consumers. Besides that, profiles with high D have a significant presence in salespeople with the most successful in sales and billing. This might be explained by their initiative, their orientation to results and their capacity for decision-making. Finally, it is evident that considering personality traits and personal profiles of sellers is a crucial factor for effective information management in direct selling and some characteristics and abilities transcend those desirable for traditional sellers.

B. Future Research

The future research will be oriented towards the design of customized development and training plans for the sales force, based on the results of each DISC profile and also the KPI resulting from the integration with the traditional data. Besides, it is intended to exhaustively study the permanence and loyalty of the seller with the direct selling company, as well as generate a model to predict the success of a current or potential direct seller.

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