SUSMILE Synthesis note

Capsule 3.3.1 - Case studies

In this Capsule, we have attached not just case studies with concrete examples of implementation that companies have respectively put in place toward a social or environmental impact over their operations, but complementary works of professors to try model the impacts of social and environment efforts on the supply chains.

Each of the respective documents has its own specific interest and objective, but teachers may want to select only some of them in order to best direct their students toward specific messages, aligned with their program development. Please note that although all documents can be read by any student, whatever their level, we recommend EQF level 4 learners skip S2 document and focus on the synthesis articles of S3, S4 and S5, to start with key concepts and a global overview of companies' effort in Corporate Social Responsibility.

Information source S2 – Food distribution study

This resource aims to differentiate the parameters of three distribution models for food products:

- Centralized distribution network with click & collect option.
- Decentralised distribution network with home delivery
- Distributed network based on a crowd logistics concept

These 3 models have emerged in the last decades due to the important development of e-commerce and the digitalisation of services, especially for the supply chain. The work is based on a literature review and then on the use of system dynamics (SD) and multi-criteria decision analysis (MCDA) models to simulate the consequences of each distribution model on gross margin, CO2 emissions, social interactions, etc.

This study is interesting because it illustrates, even through a single market simulation model, the complexity of supply chains and the many factors that need to be taken into account to improve environmental impact and still make a profit for the company. At this stage, it sets the basis for thinking about how to build a supply chain strategy that can influence the company's business model or commercial strategy. It is important to bear in mind, however, that this study does not address another set of constraints that need to be addressed before implementation: regulations, public perception of the different infrastructures, ability of partners to distribute and access city centres, etc.

Information source S3 – Sustainable last mile

This paper presents the results of an Accenture economic model to calculate the impact on outcomes such as emissions and traffic congestion, based on elements such as the prevalence of local fulfilment centres, population density, average distance travelled per parcel, delivery vehicle mix and consumer demand projections. Compared to the previous study, this is a broader approach to the last mile of the supply chain, to focus on "how to become greener".

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The demonstration compares distances and organisational models, between a central distribution delivery model and a local fulfilment distribution network. It also demonstrates the impact on the transport mode options to reach the final destination, taking into account the volume of freight remaining for the very last mile when the execution is local. Although you won't find economic data to compare the rates of return of each model, they have identified what they call "3 fundamentals" for greener last mile logistics that are interesting to consider in light of all the previous content provided in the SUSMILE MOOC.

Information source S4 – Amazon Corporate Social Responsibility

This third source of information now refers to a concrete business model; Amazon's standards manual and the corporate social responsibilities they claim and expect from all their stakeholders. We can see their expectations with an established code of conduct, minimum social requirements, transparency aspects - including compliance, and environmental performance indicators, for which they recommend a dedicated assessment tool.

The document may not be totally specific to each indicator and recommendation for their suppliers, but it is a major step as a policy and Amazon may cancel an existing agreement with actors who do not meet their minimum requirements. Coordinating a very complex network of operations and partners is a real challenge, and although there have been several public cases of difficult social conditions in its warehouses, Amazon also invests heavily in experts and engineers to work on the social and environmental impacts of its operations.

It is a sign that even a major global player can no longer ignore the need to protect the environment and put workers at the centre of operations in the modern distribution system.

Information source S5 – Collaborative transportation

In this last case study, the very example used as case study is the press distribution in France, focusing on how the major actors in the market have collaborated to mutualise their networks in order to be more efficient while keeping their margins and operating costs under control. It basically demonstrates that it is possible as long as the logistics sharing analysis is done at strategic level and projects both competitors on the long run. The benefits of such model are significant savings in terms of trucks, infrastructures, energy… hence environmental impacts.

And before that specific case study, you may also find examples of collaborative tools and methodologies that have changed the practices among supply chain actors. These tools demonstrate the capacity of supply chain stakeholders to share data and infrastructures, yet they must overcome some limitations or obstacles in the process, as for any project implementation. All of such initiatives do optimise the use of resources, may it be vehicles, energy, or equipment.

Capsule 3.3.1 synthesis

Our society is complex and although there are many attempts to formulate models and demonstrate the benefits of a greener supply chain, the sheer volume and complexity of information that needs to be collected to formulate a universal model that cannot be challenged makes it difficult.

Yet it is easy to understand that our planet demands responsible behaviour from all of us, that natural resources are not infinite and that people need to be at the heart of business practices and not seen

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as just a resource. This is exactly why it is essential to take into account the three pillars of corporate social responsibility (economic, environmental, social).

There are many examples of companies investing time and money to improve their working conditions and environmental impact. Last mile delivery is no exception. It is simply more complex due to the high density of options, the large number of constraints, the multiple regulations and the increasing expectations of end customers, who have changed their behavioural patterns in recent years.

There will probably not be a single model to meet the concerns of each retailer, the specificities of all products and the environment and history of each city. But it is certain that collaboration, sharing of data and experiences, and revision of existing business models will play an important role in a more efficient and sustainable last mile delivery.

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Second part – Questions

EQF level 4

1. S3 Why are local fulfilment centres beneficial to the environment?

2. S4 What are the key aspects that Amazon's Supplier Code of Conduct focuses on?

3. S5 What are the different types of collaboration that are classified for the transport and logistics sector according to the document? Please define them.

EQF level 5

1. S2 Which distribution model performs best when using economy, environment, society and technology criteria as weights of comparison? Can you explain why in a few sentences?

2. S3 What are all the identified benefits of a local fulfilment strategy?

3. S4 What are the main recommendations that Amazon suggests to their suppliers' network in regard to environment protection?

4. S5 Can you list the different limitations and obstacles that are likely to challenge a proper collaboration among freight actors? Can you provide examples and give in opposition to those examples of motivators?

EQF level 6

1. S2 What are the global conclusions made by the study to compare the different distribution models?

2. S3 What is the conclusion made by Accenture regarding the coordination of stakeholders to make a sustainable last mile distribution?

3. S4 Do you consider this document restrictive for suppliers to be part of Amazon's distribution network? Can you explain why?

4. S5 Can you explain the conclusions of the case study presented about French press distribution? What were the conditions to success?

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