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Building a Competitive and Sustainable Horticulture Business Model for “tHuismerk”

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ABSTRACT

The greenhouse horticulture sector in the Netherlands is experiencing serious competitive issues. A combination of factors such as excess production, insufficient local demand, declining exports and retail price pressure has made it impossible for growers to make any profits. In response to this situation, a group of 10 green house vegetable (tomatoes, cucumbers, eggplants and bell peppers) growers has agreed to join hands and work towards creating a new business model. To formalize this cooperation they have agreed to work on creating a joint brand and named it “tHuismerk”. At this stage they need help in developing a differentiating and profitable business model for “tHuismerk”.

To assist in this, the authors have developed a theoretical framework and have explained how the components of the theoretical framework can be used to develop an executable business model. The application of this framework is presented in the context of a real case study.

Participating students are tasked with developing the business model using this background information and the theoretical framework presented in this paper. Four concrete questions have been provided to provide guidance.

Keywords. business model, entrepreneur, horticulture chains, market creation, sustained business advantage

1 Introduction and case background

Horticulture value chains are quite critical for the food & agribusiness sector and currently these chains are facing growing consumer expectations for variety, food safety and security. The sector as a whole is experiencing several challenges leading to lack of profitability, causing several businesses to be near default. In the Dutch context, supply exceeding demand, lack of product differentiation, dependency on exports, and lack of consumer driven approach are cited as critical reasons for low to non-existent profit margins in this sector. Horticulture stakeholders (operating at different levels of the value chain) are looking to new business models for creating & delivering value to overcome these difficulties.

For this assignment we present the case of 10 greenhouse vegetable growers operating in the Netherlands. These growers have their glasshouses located within a 40 km radius of The Hague (514.861 inhabitants as on 01-01-2015) and Rotterdam (623.652 inhabitants as on 01-01-2015). A clear profile of each of these 10 growing companies indicating their production area, product focus, production volume and differentiating approach are indicated in exhibits 1, 2, and 3 in the appendix. Each of these growers produces in greenhouses and predominantly sells through traders and importers within the Netherlands and other countries in the European Union. For a long time the objective of these producers has been to maximize supply productivity rather than maximizing value (their production output per hectare from exhibits 1, 2, and 3 (appendix) demonstrated for each of the companies their production and productivity

focus). This approach influenced both the varieties of vegetables produced and the distribution strategy, and resulted in less value oriented innovation in favor of innovation focused on maximizing production. Rarely was innovation driven by consumer/market considerations such as changing consumer tastes, new marketing methods, packaging, market position and distribution, advertising, or pricing.

As a result growers were blindsided by market developments when the huge demand from the European Union brought in similarly production oriented and lower cost competition from Spain, Morocco, Turkey and eastern European countries. The competition of growers all having a similar strategy led to lack of differentiation and brought huge price pressures to bear. As a result each of the 10 businesses featured in tHuismerk have reached the same dead end and have realized that they need to collaborate and build a new business model that is more market driven, sustainable and profitable.

This group of 10 growers sees opportunities in changing consumer demands and tastes. Consumer awareness about food quality and their interest in sustainable food is increasing. Consumer spending over the internet for specialty food products is increasing. A growing number of consumers want authentic and fresh local products produced and harvested in the region where they live (exhibit 8 (appendix) provides an insight into consumer preferences and buying behavior of local and organic products). Lifestyle attributes like variety, convenience, price, health, taste and food are now more important. Most growers (from the group of 10 growers) are able and willing to add niche vegetables and herbs to their production portfolio and see the potential in local-for-local branding and distribution as a sustainable and profitable business opportunity. However, they need help in working out an entire business model to capture this potential.

Exhibit 4 (appendix) provides insight into the production potential within the Netherlands for different vegetable products. Exhibit 5 (appendix) provide insight into percentage share of different distribution channels for fresh produce selling and consumption. Exhibits 6 and 7 (appendix) provide a good overview of the distribution of costs and margin along the fresh produce vegetable chain.

In the next sections a theoretical framework indicating the process of developing a business model is presented. Further to that the application of the framework is explained in the context of a differentiating business model developed by a Dutch Tomato growing company.

The analysis and the development of the theoretical framework^{*} builds on literature reviews[†], expert interviews and case studies of innovative business models that suggest that a successful business model needs at least 4 complimentary components (figure 1):

1. Differentiated and competitive value proposition.
2. A well worked out distribution strategy.
3. Complimentary chain partnerships.
4. Embedded sustainability elements.

These 4 components will provide the basis for the presentation of the theoretical framework in the following sections.

^{*} The theory suggested as a reference on building a business model has been presented at the IFAMA conference in Minneapolis in June 2015

[†] A detailed literature review used to build the theory for developing the business model is presented in Exhibit-9

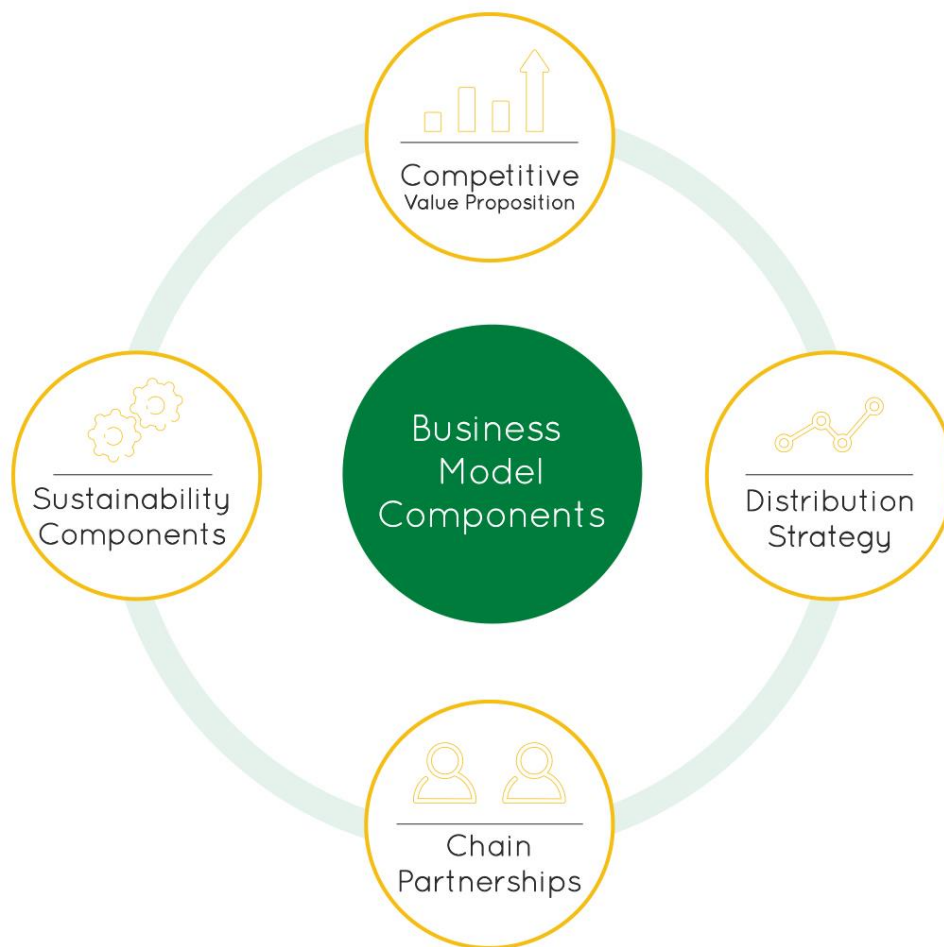


Figure 1. Business model components

2 Component 1: Thinking hard about competitive value proposition aligning specific demand-supply dynamics

A value proposition is generally made up of one or more “*differentiating attributes*” that a sizeable segment of customer[‡] is able and willing-to-pay for. The differentiating attributes could be direct product attributes, service attributes or a combination thereof. Examples of product attributes in the context of horticulture are freshness, variety, health impact, consistency, availability, affordability etc., while attributes such as convenience and customization are service attributes. A clear and competitive value proposition is designed by using one or more differentiating attributes. Using data related to existing market offerings, a business can identify and develop a value proposition to identify and develop an underserved market. This is market innovation, the process of defining and serving combinations of new customer segments and new product attributes.

The authors have developed a visual tool (figure 2) to assist in identifying exploitable attributes and underserved market opportunities. The tool uses a matrix to match identified product attributes, customer preferences, and competitor performance and then compares them using a numerical range of 1 to 5. The greater the level of insight and intuition in using the tool, the more differentiating the value proposition can be.

Stages of the Value Proposition Tool:

Step 1: Make a list of product and service attributes likely to contribute to a new differentiating value proposition.

[‡] We consistently try to use customer segments to cover industrial clients and the end-consumers. A customer segment is a sizeable group (in its current form or growth form) that is able to offer a realistic business case

Discussion: Product and service attributes are the key starting points in creating the value proposition. The above table lists some common product attributes but is in no way exhaustive. In fact the innovative entrepreneur identifies and creates new attributes as a way to differentiate and create a competitive value proposition. In that sense the tool is open ended and can accommodate whatever attributes an entrepreneur believes would be valued and paid for.

Step 2: Define target consumer segment and distribution strategy most likely to reach it.

Discussion: The tool defines the consumer segment in the context of a distribution channel. The reason for this is that, in the context of food, a consumer nearly always makes use of several channels and his/her behavior at each can be quite different. Gajanan & Basuroy (2007) describes how consumers perceive and respond to sellers, their products, and the environment in which they are sold and vice versa. For example a consumer at a retail supermarket exhibits higher price sensitivity than at on-the-go channels (such as train stations). Hence to be able to create a more pragmatic and executable value proposition, the tool considers both the consumer profile and the distribution channel.

Step 3: Assign numerical values ranging from 1 to 5 to each of the items above (step 1) which reflect the students evaluation of their relative importance, less important is indicated by a lower number. Place these numbers in column A1.

Discussion: Once steps 1 and 2 are worked out appropriately, the students evaluation of each attributes relative importance to the consumer segment and effectiveness of the distribution channel can be marked on a scale of 1-5. This is represented by the column A1 in the tool.

Step 4: Make a list of current competitors serving the target market and evaluate their performance in serving the attributes identified in Step 1 again using numerical range 1 to 5. Place these values in column A2.

Discussion: Subsequently, the current ability of the most effectively performing player (we call this process benchmarking the competition) can be mapped, again using the same scale 1-5. This benchmarking is presented in column A2.

Step 5: Calculate the difference A1 to A2 and place into A3.

Discussion: the difference column A3 (A2-A1) gives an indication of the potential underserved demand. If an entrepreneur can address this gap through already existing capabilities, or through investment, then there is scope for action. The table matrix indicates the degree of competitive value proposition space available to the entrepreneur in comparison to the competition. If there exist attributes which in the entrepreneur's perspective are valued highly by a specific target segment, but ignored by the benchmarked competition, there is a scope for addressing an unmet need and an entrepreneur has identified an opportunity.

| | Attributes | A1 (Customer interest) | A2 (Benchmark) | A3 (Differentiated value proposition) |
|---------|------------------|---|-------------------|---------------------------------------|
| | | Customer segment and distribution channel combination | | |
| Product | Taste | 5 | 0 | 3 |
| | Variety | 1 | 1 | 1 |
| | Freshness | 1 | 1 | 1 |
| | Healthy elements | 2 | 1 | 2 |
| | Affordability | 4 | 2 | 3 |
| | Consistency | 2 | 1 | 2 |
| | | | | |
| Service | Availability | 2 | 1 | 2 |
| | Convenience | 2 | 1 | 2 |
| | Customization | 2 | 1 | 1 |
| | | | | |

Figure 2. Value proposition tool

In summary, after performing competitive benchmark mapping to specific consumer segments and to differentiated product attributes, entrepreneurs/businesses can design their value proposition based on a combination of factors such as:

- Current capabilities that will allow it to service the underserved or unmet attributes better than the competition
- The revenue and the growth potential of the current market segment and how easily it can be extended to other consumer segments in future
- The ease of forming partnerships to deliver the value proposition

To demonstrate the process of developing a value proposition we present and discuss the value proposition for the Honingtomaten® initiative of the company Looije Tomaten based in the Netherlands.

Case Study: Looije Tomaten

Looije is a family company in the Netherlands that was set up in 1946 by J.M. Looije, the father of the present-day director Jos Looije. The company started out growing a range of vegetables. The oldest son, Jos Looije, joined the company in the 1970s, which is when the company started to specialize in growing tomatoes. In 1992 they further specialized to growing cherry tomatoes and in 2000 they added vine cherry tomatoes to their product range. Up until 2003 they had sold their produce through auction houses, but afterwards they started selling direct. It was in 2005 that they decided to launch a specialized brand of tomatoes called Honingtomaten®.

Building the value proposition for Honingtomaten® of the company Looije Tomaten

The value proposition of Honingtomaten is outlined in figure 3. One of the most important insights is that while the consumer segment group buying tomatoes at specialized stores value several attributes such as taste, variety, freshness, health benefits, product consistency, and convenience, the industry as a whole was hardly delivering on these dimensions. As an example, while the consumer segment in consideration values the attribute freshness with a rating of 5 the existing benchmark is only delivering a value of 2. In this situation, Looije with its capabilities and new positioning could offer e.g. a rating of 4. The approach Looije has taken to come to the value proposition indicated in Figure 3 can be presented as follows.

| Attributes | | Specialized fruit and vegetable shops & Gourmet food service | | |
|------------|-----------------|--|-------------------|--|
| | | A1 (Customer interest) | A2 (Benchmark) | A3 (Looije's differentiated value proposition) |
| Product | Taste | 5 | 2 | 3 |
| | Variety | 3 | 1 | 2 |
| | Freshness | 5 | 2 | 4 |
| | Health benefits | 4 | 1 | 3 |
| | Consistency | 5 | 1 | 4 |
| | Snacking | 5 | 1 | 4 |
| Service | Convenience | 3 | 1 | 2 |

Figure 3. Value proposition of Honingtomaten®

After looking at the commoditization of the tomato chain and increased price pressure from retail businesses, Looije and his team have decided to create a differentiated value proposition for their tomato products. The Honingtomaten® value proposition journey began in 2005 and provided the following key insights:

1. Looije Tomaten have understood that while there is a consumer segment that value taste of tomatoes, the industry is focused on delivering volume at lower price. Furthermore, they know taste is influenced by growing conditions and also know that only 20% of every harvest is of the highest taste standard. Hence Looije Tomaten saw an immediate differentiation opportunity by exploiting this tastiest 20%.
2. For the same reasons, industry was focused on lower price rather than taste/freshness which left a certain consumer segment unhappy
3. Looije found the same segment that valued taste highly also valued health benefits, but growers did not know how to position and market tomatoes to take advantage of this.
4. Consistency of taste and quality as well as price was a major issue and the consumer segment that was not wholly driven by price was not getting the attributes they desired.
5. Finally, a service attribute, namely convenience, strongly influences food buying behavior, but the tomato growers did not understand how to combine convenience with a superior tomato.

Looije Tomaten figured out a way to address each of the above elements as follows:

1. They learned how to isolate the 20% of tasty tomatoes from every crop. It was a combination of art and science (growing knowledge, extensive taste tests etc.)
2. They invested in a customized human sorting and packaging facility to ensure that product uniformity and product freshness is ensured and maintained. As a result of this initiative their logistics costs doubled but the desired freshness and consistency have been achieved.
3. They realized that these tasty tomatoes could be positioned as a snack and a specialty gourmet product that would meet both the health and convenience attributes desired by the consumers.

Looije Tomaten was able to differentiate in several dimensions, taste, consistency, and the positioning of the tomato as a healthy and convenient snack, thus fulfilling several underserved needs. This value proposition gave birth to Honingtomaten® a differentiated tomato using a distribution channel that commands a consistently higher price throughout the year.

3 Component 2: Clarity on the distribution model catering to specific market segments

The second most critical component is aligning the distribution strategy with the value proposition. The distribution strategy is the mode of downstream partnerships that will enable delivery of the promised value proposition to the end-consumer. In practice, distribution strategy is largely defined in the process of creating the value proposition and in a few cases distribution strategy is a part of the value proposition. This occurs during the process of defining the attributes which characterize the target market segment for which the value proposition is actually created and forces the entrepreneur to actually think about how to reach it. This in turn affects the choice of the distribution channel partnerships and the mode of revenue generation.

Nalla and Kouwenhoven (2014) have dealt with the importance of distribution channel choice and its relationship with the go-to-market strategy. The main message of Nalla and Kouwenhoven (2014) is that a differentiated value proposition requires a differentiated distribution strategy. Their research contribution has been the development of two concrete frameworks for entrepreneurs, one to understand the distribution landscape and the second to choose the right channel to match the life cycle of the value proposition. For the student using this theory the application of go-to-market strategy becomes clearer when applied to the case of Honing Tomaten.



Figure 4. Go-to-market strategy framework for innovative food products

The go-to-market strategy framework shows the four steps which lead from innovative product to the status of a conventional mass commodity.

Step 1 is about setting-up a well worked out specialized distribution strategy either with an on-line strategy or niche physical retail channels to reach out to the target consumers and ensure that they have tried the product(s). In **Step 2**, the business should endeavor to use specialized physical distribution channels that offer higher potential volume than the niche distribution channels in Step 1. In **Step-3**, the product becomes relevant and interesting for volume driven brand building retailers. In **Step-4**, the product is ready to go into the mainstream retail formulas that are driven primarily by price and volumes. A detailed explanation of each of these four steps and the actions that need to be taken is extensively covered in Nalla & Kouwenhoven (2014).

Below, the authors discuss the distribution channel strategy for the case study chosen for this exercise.

Honingtomaten® understood that their differentiating value proposition needed a distribution approach different from the traditional wholesale model. Hence they approached the specialized fruit & vegetable retailers and gourmet food service distributors. The value proposition of Honingtmaten® was immediately clear to these channels as they could see that this product had potential to appeal to their consumer segments. Honingtmaten® also promised their channel partners that Honingtmaten® would remain committed to these channels and would never go to the conventional channels. This way the channel partners maintained exclusivity and took special care in promoting Honingtmaten®.

In the next section the role of complimentary partnerships will be discussed.

4 Component 3: Value chain and ecosystem partnerships for delivering the value proposition:

Almost always, a competitive value proposition creates interdependencies with other complimentary businesses both upstream (suppliers) and downstream (distribution) in the value chain. Additionally, it needs support services of other critical eco-system partnerships in logistics, IT, marketing etc.

In addition to the key product and service value proposition, it is the committed and eco-system partnerships that have the potential to offer a longer term competitive advantage.

Looije, the parent company of Honingtmaten® explicitly touts the power of partnerships and explains very clearly on their website how and why they created their unique eco-system and the competitive advantage it offers them. The collaboration ranges from banks, to information technology companies, breeding

companies, green house technology companies, distribution channel partnerships etc. and ensures win-win opportunities for all the players involved. It is clear from their more than 10 years of sustained competitiveness in maintaining their value proposition, that committed and differentiated eco-system partnerships can indeed enable a sustained competitive advantage. For a more detailed understanding on the diverse range of complimentary partnerships please visit their website link (http://www.looijetomaten.nl/index.php?option=com_content&view=article&id=104&Itemid=175&lang=en)

From the above discussion, it is clear that complimentary and carefully designed partnerships are critical for building a successful horticulture business model. This essentially means that successful business models require structural business associations that are more than simply transactional (cost driven) business associations.

In the next section we deal with an additional but important component, the sustainability elements.

5 Component 4: Sustainability elements embedded in the value proposition

Sustainability elements are valued more and more by environment and resource conscious consumer segments. And such consumer segments are seeking and are willing to pay a premium and express loyalty towards offerings that have sustainability embedded into the value proposition. Hence sustainable food solutions have gained traction in the marketplace. Exhibit-2 presents some of the consumer side perceptions about sustainability. Sustainability is a very broad concept and any generalizations are risky, but the literature shows that sustainability elements embedded into core business models promote greater consumer acceptance than otherwise.

Honingtomaten® model that is primarily focused on marketing and brand building exercise has the following embedded sustainability elements:

- *Because of a different positioning, Honingtomen are sold in the local markets unlike the other players that are mainly export focused. This approach leads to short chains, reduced transportation and in turn reduced food wastage*
- *As Looije tomaten works in a partnership mode with its distribution and other chain players it offers making the chain more robust and business for each player more sustainable*
- *In order to ensure consistency in taste Looije has to go through very close quality control and logistics management processes ensuring high quality products and food safety*
- *Also because of the positioning of the product as a snack it offers more healthy snacking alternative (as opposed to processed snacks) for the consumers contributing to better health & wellness of the consumers.*
- *Local distribution, fool proof logistics chain, working in partnership mode with complimentary chain partners reduces food wastage*

6 Summary

Without a business model perspective, a company is a non focused participant in a dizzying array of networks and passive entanglements. Adopting the business model perspective can help executives purposefully structure the activity systems of their company.

The basic premise of this exercise is that supply-demand dynamics within horticulture value chains are changing quite rapidly and that these fast changing dynamics will challenge the current approach to creating (production) and delivering (distribution) value to consumers. New ways to create and distribute value is only possible by restructuring businesses and their business models. The growers of 'tHuismerk' now accept that they need to re-align their business models with the realities of the market place; it is less clear how to go about achieving this. Nevertheless a new business model for tHuismerk needs to be developed if it is to thrive within these new realities. It is into this environment that participating students will soon be graduating. In the process of helping tHuismerk answer the questions posed within this exercise, the student develops market relevant skills and helps himself prepare for the challenges of the future.

7 Concluding statement and case questions

The task for participating students is to use the given theoretical framework and identify:

- The value proposition [The product-service offering] for tHuiskerk
- The value delivery [The distribution strategy] tHuiskerk should adopt
- Resource and chain partnerships [Businesses enabling the creation and delivery of value proposition] required to execute the new value creation and delivery process for tHuiskerk
- Sustainability components [addressing the effects on people, society and the environment while pursuing the profit component] that tHuiskerk can deliver in its new business model

Students should use the following questions to clarify and address the problem:

1. What differentiated value proposition should tHuiskerk adopt and why?
2. What distribution strategy would facilitate the delivery of the differentiated value proposition by tHuiskerk?
3. What complimentary chain partnerships would enable tHuiskerk to deliver the value proposition?
4. What are the embedded sustainability elements in the new value proposition of tHuiskerk?

Note

This case is based on a true business situation, and was prepared to provide material for class discussion; it is not intended to illustrate effective or ineffective handling of a managerial situation. The author may have disguised certain data to protect trade secrets and preserve confidentiality. Interested instructors at educational institutions may request access to a teaching note and additional material by contacting the editor of the IJFSD.

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Appendix

Exhibit-1: Profile of the companies (1-3) representing the tHuismerk brand

| | Production Area | Product Focus and Production Volumes | Differentiating Elements |
|------------------|---|---|--|
| Company 1 | Cultivates in about 40 hectares in 3 different but logistically well-connected locations. Furthermore they own a packaging location in the Randstad (5 km from Delft) | Entire production is currently dedicated to different varieties of Tomatoes. The average yield is about 500-600 tons per hectare. | Sustainable business (geothermal energy and generate their own electricity and produce CO ₂). Possesses highest certification standards relevant for horticulture industry. |
| Company 2 | Over 25 hectares of greenhouses and two sorting sites specialized in the production, sorting and packing tomatoes. | From February to December, they deliver different varieties and packaging to suit the different needs of the customers with an average yield of 600 tons per hectare. | Environmental sustainability is their strategic priority. Their approach to innovation is to work collaboratively with their customers, suppliers and employees. |
| Company 3 | The company has 2 locations with a total production area of 14 hectares. | Involved in the production of special varieties of tomatoes with an average yield of 320 tons per hectare. | They are considered masters of new technology adoption. As a part of their environment sustainability ambition they have achieved their grand ambition of 50 percent energy savings and 50 percent CO ₂ emission reduction. |

Exhibit-2: Profile of the companies (4-6) representing the tHuismerk brand

| | Production Area | Product Focus and Production Volumes | Differentiating Elements |
|------------------|--|---|---|
| Company 4 | The company owns 3 Hectares in the Randstad region of the Netherlands. | Engaged in the production and harvesting of eggplants each day. Sorting and packaging elements are carried out to suit specific customer requests. The yield of the substrate-grown eggplant is 500 tons/ hectare | The grower is certified Eurep Gap. They work with the most modern equipment, according to all hygienic rules. Much attention is paid to presentation. Taste tests are held and there is great attention to new varieties. |
| Company 5 | Ultramodern business with 5 hectares of brand new greenhouses. | Eggplants, produced annually in the period from January to November with an average yield of up to 500 tons/hectare. | Quality is their main trademark. Adoption of latest technology innovations in combination with experienced staff gives them the opportunity to meet their quality promise. |
| Company 6 | Production area of slightly more than 2 hectares | The average yield is 1600000 to 2000000 cucumbers per Hectare. | Consistent quality is their main motto and all their processes are driven in meeting this promise. |

Exhibit-3: Profile of the companies (7-10) representing the tHuismerk brand

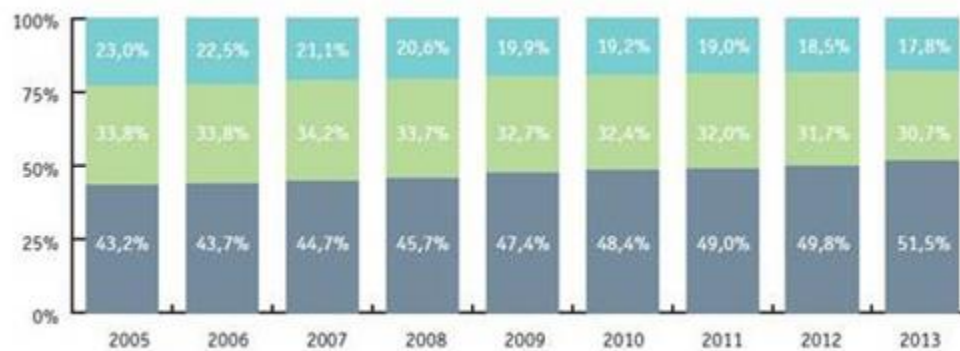
| | Production Area | Product Focus and Production Volumes | Differentiating Elements |
|-------------------|--|--|---|
| Company 7 | Production area of about 2 hectares. | 1 hectare of tomatoes: they harvest about 650 tons of tomatoes from one hectare. 1 hectare snack cucumbers: The yield per hectare in the greenhouses is 2.000000 snack cucumbers per hectare. | To share a healthy product, with minimal use of pesticides. |
| Company 8 | Production area of slightly more than 8 Hectares. | Involved in the production of Tomatoes with an average yield of 600 tons per hectare. | Tasty and healthy tomatoes is what they work for. Seeking to maximize potential for organic farming and invest in innovation to ensure sustainable use of water is their key focus. |
| Company 9 | Have a coverage of approximately 10 hectares. | Combination of cucumbers and (autumn) tomatoes. In 2006 they started with two cucumber crops per year and beyond (autumn) tomato cultivation. The yield of tomatoes is 300 tons/hectare and 1.600000 pieces per hectare. | Deliver a fresh product of high quality. The only company of the group that sells directly (i.e. bypasses the traders and the auction mechanism). |
| Company 10 | 2 Hectares of Greenhouses and 4 hectares of open field production. | Year round cucumbers. They perform each crop rotation in three parts in order to provide as continuous cucumbers quality. All sales go through the producer organization. 2.000000 cucumbers harvested per hectare. | Holds all certifications needed to meet the highest demands of hygiene, food safety and quality. |

Exhibit: 4: An overview of yearly Dutch production numbers for different products.

| | Region | the Netherlands | | | State of South Holland | | |
|---------------------------------|-----------------------------|-----------------|------|------|------------------------|------|------|
| | | 2000 | 2012 | 2014 | 2000 | 2012 | 2014 |
| Production under the greenhouse | Eggplant | 756 | 105 | 103 | 55 | 54 | 47 |
| | Strawberries | 163 | 288 | 314 | 2 | 6 | 7 |
| | Cucumbers | 663 | 622 | 598 | 218 | 123 | 104 |
| | Bell peppers | 1155 | 1313 | 1163 | 774 | 718 | 630 |
| | Tomatoes | 1133 | 1691 | 1780 | 749 | 965 | 1026 |
| | Other greenhouse vegetables | 715 | 415 | 408 | 438 | 240 | 224 |

Source: Central Statistics Office CBS StatLine, 2015

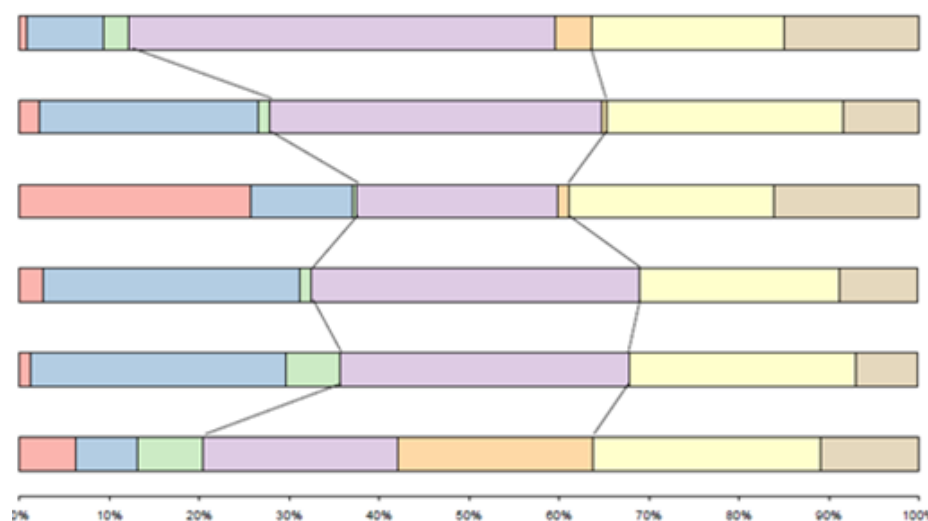
Exhibit 5: Market share of Food through different distribution channels in the Netherlands



- Specialty shops (blue)
- Foodservice (green)
- Supermarkets (gray)

Source Central Office Food Trading, CBL

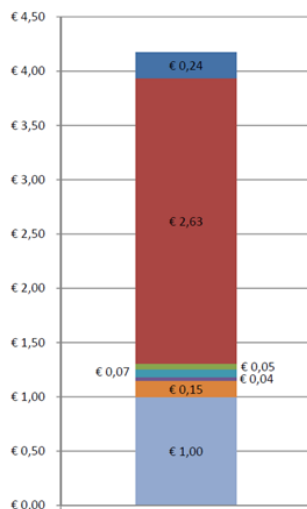
Exhibit 6: Average cost and profit margin distribution structure along the entire fresh vegetables chain (in% of the retail price)



From top to bottom: onions, peppers, eggplants, cucumbers, apples, potatoes
 From left to right: Production cost producer (pink), other cost producer (blue), producer margin (green), wholesale cost (purple), wholesale margin (orange), cost supermarket (yellow), margin supermarket (light brown)

Source: Dutch Competition Authority, NMa, 2009

Exhibit 7: An example of average margin distribution along the chain (the case of red peppers)



- 6% VAT
- 63% gross margin supermarket
- 1% wholesale: warehousing, sales activities
- 2% wholesale: transport costs
- 1% wholesale: logistics costs
- 4% wholesale: packing costs
- 24% grower

Source: Noll, R. van der, Baarsma, B., Rosenboom, N. (2010). Van teelt tot schap; Waardecreatie door de groothandel in groente en fruit. SEO Economisch Onderzoek.

Exhibit 8: SWOT Analysis

SWOT analysis market potential regional horticultural products

| Strength | Weakness | Opportunities | Threats |
|---------------------------------|--------------------------|--|--|
| Connection farmer- citizen | Logistics | Climate & energy | Fake |
| Storytelling (farmer/grower) | Volume remains too small | Animal welfare | Food scandals, Incidents in the food chain |
| Fresh | Less cooperation | Landscape, scenery | |
| Reliable | Availability | Local economy (restaurants, out-of-home, caterer) | |
| Tasty | Assortment | Cooking trend (tasty, authentic) | |
| | Quality assurance | Children (healthy meals) | |
| | Perception | | |
| | Distinctiveness | | |

Source: Vijn, M., Schoutsen, M., van Haaster, M. (2013). De marktpotentie van streekproducten in Nederland; Uitkomsten van een consumentenonderzoek en SWOT analyse.

SWOT analysis 'Region: Opportunity or threat to bio'.

| Strength | Weakness | Opportunities | Threats |
|--|-------------------------------|---|------------------------------------|
| Logical story towards consumers | Logistics | Strengthen each other | The region is poorly defined |
| Transparent communication, perception, sustainable | Insufficient supply | Consumer demand | Too expensive |
| Synergy | Marketing, value, recognition | Regional experience, connection & economy | Store chains (power of the retail) |

Source: Vijn, M., Schoutsen, M., Monteny, A., Visser, A. (2013). Zijn streekproducten een kans of bedreiging voor de biologische sector?

Exhibit-9: Literature research

The following literature review was used as the basis for building the business model theory used in this paper.

Ahmed et al (2011) studies the competitive dynamics within fruit and vegetable value chains in emerging markets and brings out insights related to work force development initiatives and establishment of connections with developed market fruit and vegetable value chains. Despommier (2010) and Oskam et al (2013) provide a good overview of high-tech production systems.

Amit and Zott (2001, 2012) suggest business model innovation as a way to create and extract value, especially in times of economic change. Osterwalder (2010) defines a business model through a canvas that is now one of the popular tools for businesses to structure and present their operational and strategic components for creating and delivering value. Nidumolu et. al (2009) in their Harvard Business Review article have dealt extensively with how sustainability is, and will continue to be, a key driver of innovation.

Without a business model perspective, a company is a non focused participant in a dizzying array of networks and passive entanglements. Adopting the business model perspective can help executives purposefully structure the activity systems of their company. This study contributes by defining innovative business model possibilities in horticulture and provides a framework on “how” to arrive at the right business model. While the Osterwalder (2010) Canvas Business model is very helpful in explaining an operational or worked-out business model it does not provide a framework on “how” to come to the right business model. The “how” element needs to take the sector specific dynamics of demand, supply and competition into account to choose the right business model. Once the right business is worked out the Osterwalder (2010) model can be quite helpful as a check. In this study, horticulture specific “how” elements addressing the creation of value proposition, creation of collaborative partnerships, and value delivery are worked out.