
BUSINESS

9609/31

Paper 3 Case Study

October/November 2019

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READ THESE INSTRUCTIONS FIRST

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This document consists of **5** printed pages and **3** blank pages.

Quality Houses (QH)

Min qualified as an architect in country Z. He has a particular interest in designing family houses. He worked for 10 years in a large building company before setting up QH as a limited company. QH manufactures wooden frame houses, for sale in country Z. QH supplies a limited range of houses as ready to assemble kits. Each house is assembled on foundations that have to be built first. Buyers can either build the house themselves or pay QH to do part or all of the work. The buyer is responsible for internal decorations. The market for these houses has expanded. Min's attention to both detail and quality has also contributed to the success of QH.

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Human Resource Management (HRM) policy

QH has specialised in producing only five house designs which are based on detailed market research. These can be easily adapted to meet the requirements of customers. QH's workforce includes 120 employees who work in teams to manufacture the kits. The directors of QH aim to maintain a supportive culture in which all employees are valued. Min and at least one other director interview all job applicants. All new employees follow an induction course and receive detailed training in the manufacturing process. They are encouraged to be self-motivated, and can choose which jobs they carry out. They also decide who their team leader will be. New ideas can be placed in a suggestions box and QH rewards people who provide cost or time saving proposals. All manufacturing employees are paid a guaranteed wage plus a bonus based on team performance.

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Capital equipment

QH uses a range of machinery to manufacture the timber frames, walls and roof material. Some of the existing machines are reaching the end of their usable lives. Min has negotiated a reduced price for some replacement machines. Table 1 shows the cost of this offer and the savings that the new more efficient machinery can make compared to continuing with the existing equipment. To appraise this investment, Min intends to use a discount rate equal to the current rate of interest. A decision has to be made within one week in order to obtain the reduced price.

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Table 1: Investment appraisal information for new machinery for wooden house kits

	Year 0	Year 1	Year 2	Year 3	Year 4
Net cash flow \$000	(350)	100	100	90	90
Discount factors at 4%	1	0.962	0.925	0.889	0.855

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Assembling the kit houses on site

More than 90% of the houses QH sells are installed and built on-site by QH. Appendix A shows a network diagram that outlines the most important processes involved. QH on-site supervisors are responsible for checking that each task meets QH's quality standards. The assembly teams are paid a bonus if they complete their task in the time allocated. All the building and safety regulations must be met. QH guarantees to assemble a kit house in 9 days. Most other kit house companies take 10 to 12 days. Min is concerned because 12% of the house kits are not fully assembled in 9 days. In addition, some have defects which require correction by QH.

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Macroeconomic environment

Country Z is undergoing changes. For most of the last 10 years there has been economic growth but this has slowed recently. The government has a large budget deficit. The data in Table 2 has just been published. The government has stated that it will give a detailed report on the policies it will use to try and achieve its macroeconomic objectives. The Finance Minister has said that these policies will be introduced quickly and will include:

- a higher rate of income tax on high earners
- an increase in interest rates
- subsidies for exporters
- increased sales tax on goods priced over \$1000
- the introduction of a tax on land developed for housing.

Table 2: Country Z – key macroeconomic indicators

	2017	2018	2019
Unemployment %	5	6	8
Average depreciation of Country Z's currency against other major currencies %	4	4	4
Inflation %	4	5	7
Interest rate %	2	2	4
Economic growth %	5	3	1
Proportion of income tax revenue collected from highest earners %	15	12	12

Expanding to another country

Min realises that there are potential large markets in other countries for wooden kit houses. He tells the directors: 'Our houses are cheaper than building with bricks and concrete, even after shipping costs have been paid. The macroeconomic factors mean that operating in country Z is becoming increasingly difficult. Competition is likely to increase. My initial research indicates that a real market opportunity exists in European countries, as population and land costs rise. Pressure to increase the housing stock is leading to a search for cheaper houses and at less than \$16000 for a wooden house kit, before transport costs, QH houses are very affordable. The European market is growing rapidly and there are very few competing firms as large as QH.'

The directors know that QH has no links with any European property developers, builders or governments. This means that the cost of setting up direct exporting at the present moment is too high. They plan to discuss the different methods QH could use to enter the European market. These include:

- franchising the local marketing and assembly of wooden house kits
- direct investment in manufacturing operations in a European country
- joint venture with a European building company.

Expansion into a new market – steel houses

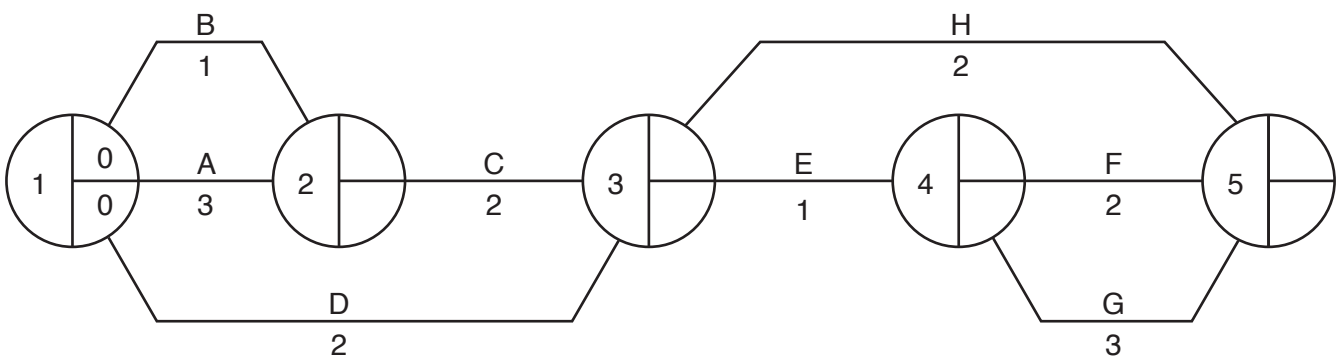
Artur, the Marketing Manager for QH, has researched a possible new product – kit houses made of steel. The manufacturing costs are similar to wooden kit houses but, because they last longer, they would sell for approximately \$100 per square metre. A wooden kit house sells for \$80 per square metre. Steel houses are more difficult to assemble and are more difficult to heat and insulate. To start manufacturing, QH would have to invest in new specialist equipment and hire more employees. New larger premises would have to be obtained. Appendix B shows some initial marketing analysis prepared by Artur.

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The directors realise that important decisions have to be made correctly if QH is to continue to grow.

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Appendix A: Network for assembling a kit house



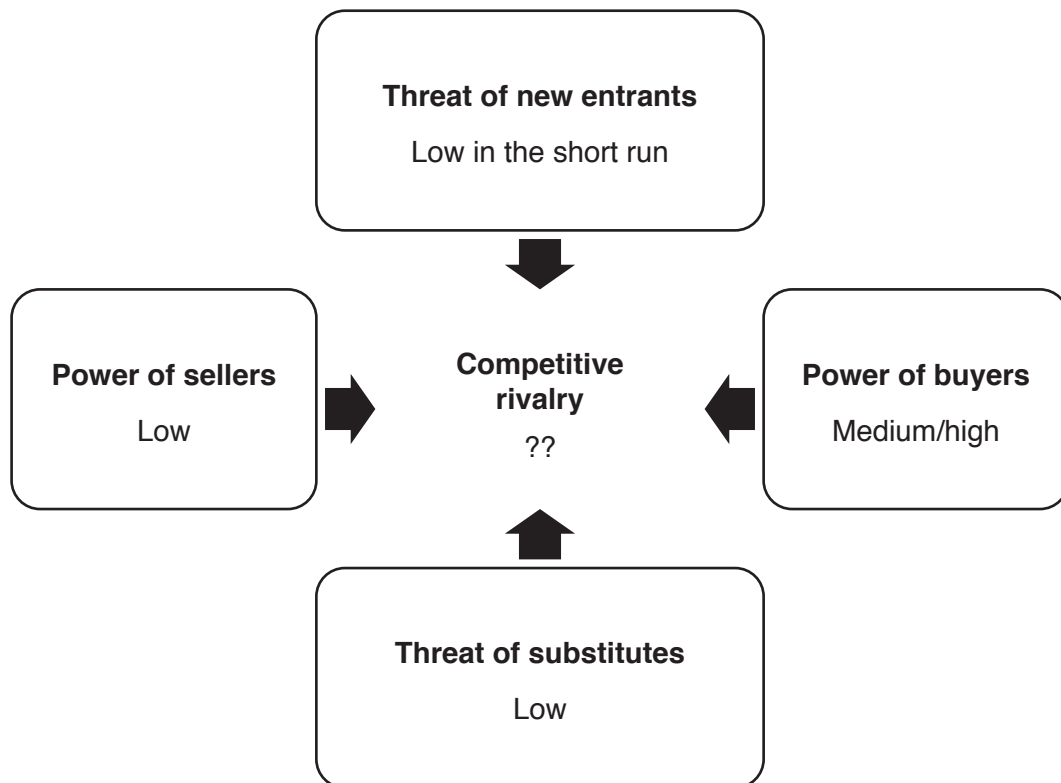
Activity	Description
A	Build foundations
B	Walls unpacked and prepared for assembly
C	Assemble walls
D	Roof unpacked and prepared for assembly
E	Assemble and fit roof
F	Install plumbing
G	Install electrics
H	Install windows and doors

Appendix B

QH SWOT analysis for expansion – steel houses

Strengths - Existing distribution channels - Adaptable workforce - Established reputation	Opportunities - Rapidly growing market - Few domestic competitors - High profit margin
Weaknesses - No experience in steel houses - High gearing ratio - Quality challenges	Threats - Macroeconomic factors - Possibility of foreign competitors - Possible high risk of losses

The market for steel house kits: Porter's Five Forces



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