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Gut feeling or reason--How do property developers decide?

An international research project on rational and intuitive behaviour in the field of property development

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Outline

I. Introduction

II. Theory

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Decision-making in real estate

- In many real estate companies decision processes are well differentiated and documented. Together with decision-making rules, job descriptions, organizational charts, management tools, etc. this is a management standard.
- That's good because decisions made purely "on instinct“, are often faulty. On the other hand, the room for gut feelings, experience, and other elements that shape the decision-making behavior of people may have become too small. However, for complex decisions such as real estate investments these “irrational” factors are indispensable.
- We do not know much about decision-making in real estate world. So overall this research aims at improving decision quality by …
  - studying various facets of decision-making in real estate,
  - combining psychological and managerial decision-making theories,
  - analyzing discrepancies between theory and practice,
  - improving processes and decision-support systems.

Rational and intuitive decision-making in property development

- Human decisions are context-dependent, for instance, influenced by the availability of information. But they also depend on the character traits of the decision-maker, e.g., the **tendency to decide intuitively** (based on emotions and affection) **or deliberately** (based on reasoning).
- Perhaps **real estate development is a field, which is prone to intuitive behaviour** due to its specific characteristics, e.g., long planning.
- Surveys have confirmed that **intuition, creativity, instinct, and similar behavioural attributes are considered critical success factors** in property development. However, that does not render market analysis, investment calculation and other rational factors useless.
- Decision theory has not yet discovered in which situation a particular type of decision-making is most advantageous. **Our research sheds light on how developers in various cultures and market contexts make decisions.**
- This work should contribute in improving the decision-making quality in the development sector..

Short introduction to decision theory

- Basic **decision theories**:
  - Prescriptive/Normative assumes rational behaviour aims at facilitating decisions by means of rules, procedures and models
  - Descriptive: assumes limited rationality, tries to analyse decisions in reality under the aspects of how and why

- Prominent authors:
  - **Herbert Simon:** Humans are not able to receive or process as much information as would be necessary for strictly rational behavior; human behavior is characterized by decisions under uncertainty, lack of information, time pressure, etc. Subjectivity influences judgments.
  - **Daniel Kahnemann/Amos Tversky:** Rational decision-making is time consuming and effortful (“Thinking slow"). Therefore humans rely on a number of heuristics ("Thinking fast"), which is often biased and reduces the quality of decisions.
  - **Gerd Gigerenzer:** Heuristics are good, following one’s intuition is in itself a rational strategy. Intuition works best if paired with expert knowledge.

Intuitive and deliberate decision-making

- Intuition = mental embodiment and reflection of earlier experiences in their entirety; not the result of retrospective processes or constructed methods
- Intuition is a thought process. Input is mostly provided by knowledge from long-term memory. Output is a feeling that serves as the basis for judgment and decision-making.
- Intution is also called "gut feeling". For good reasons: That area of the body is full of nerve cells and glands, making it a "second brain, which is responsible for restlessness or sadness and can influence decisions.
- Intuition is area-specific and its development takes time. Experienced experts first concentrate on the details of a problem and then search for possible solutions by recognising similarities.

Motivation for this study

- In recent years, a lack of behavioural research in real estate was identified, the need of more in-depth research in this field would assist in the many unanswered questions, some of those being:
  - Are real estate decisions special?
  - Are investment decisions different than others?
  - Influence of character traits, risk attitudes, cultural differences etc. on decision-making?
- Bachelor thesis of Dominique Lösch, presented at ERES 2012:
  - Intended to substantiate the importance of intuition for property developers
  - 35 German real estate developers, 21 German students
  - Experiment and personality test
  - Results were interesting, but inconclusive
  - Reasons: research design and sample size
- We need to have a fresh look at this issue (based on Lösch's work)

Hypotheses

1. Intuition exerts an influence on the decisions of property developers
2. A developer decides intuitively not only if the situation calls for an intuitive decision, but also if the situation allows a rational decision.

Methodology: Experiment + Survey

1. **Personal questions** (e.g., age, gender, experience, nationality)
2. **Personality inventories**
   a) PID („Preference for Intuition and Deliberation“), Betsch (2004). Intuition is not the opposite of deliberation. Both are independent dimensions. For instance, an intuitive decision may be made after a thorough information search or a deliberate decision may be influenced by emotions. Furthermore, decisions also depend on the characteristics of the situation, e.g., time pressure. (Betsch 2004, p. 180)
   b) TIPI („Ten Item Personality Measure”), Gosling et al. (2003), to measure the “Big 5” personality dimensions.
   c) Kurzskala Risikobereitschaft (Single-Item scale to measure readiness to assume risk), Beierlein (2014).
   d) CVSCALE (26-item scale to measure Hofstede‘s five dimensions of cultural values at the individual level), Yoo, Donthu, Lenartowicz (2011).
3. Questions to a decision situation described in a fictitious **case study** with two sccenarios A (appealing to the intuitive type) and B (appealing to the deliberate type), each with detailed description including graphs, maps, tables, etc.

Preferences

- "Big Five" is the predominant model of personality traits in psychology
- Persons who have a tendency to decide intuitively normally score high on four of these dimensions and very low on the fifth. And vice versa.

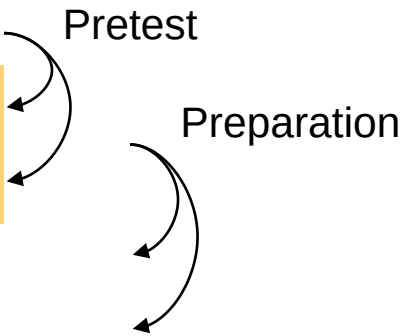
Preference for intuition	Preference for deliberation
• Thinking and deciding FAST • Extraversion* • Agreeableness* • Openness to experience* • Emotional stability*	• Thinking and deciding SLOW • Conscientiousness* • Need for structure • Striving for maximization and perfection

*Dimensions of the Big 5 personality test

- Examples for items in the PID inventory:
  - "When I have a problem I first analyze the facts and details before I decide."
  - "My feelings play an important role in my decisions."
  - "I am a perfectionist."
- 5-stage Likert scale from "I very much disagree" to "I very much agree"

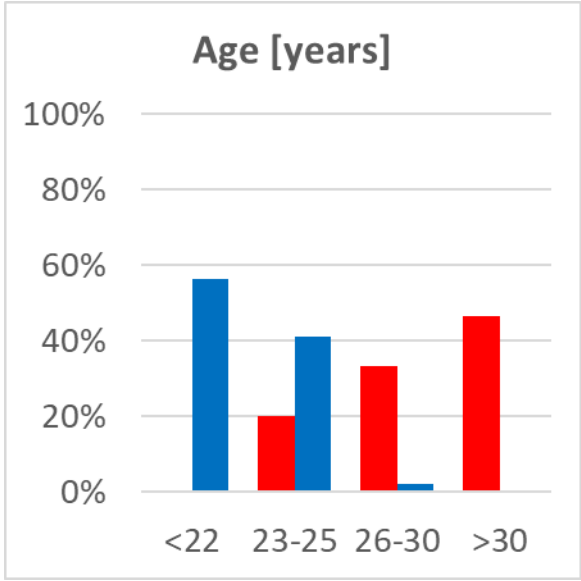
Two samples so far

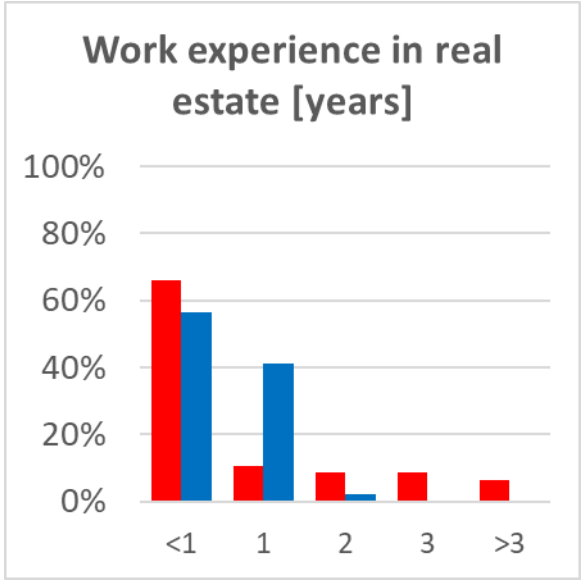
1. 27 Bachelors‘ students, 3rd semester in Germany
2. 47 Bachelors‘ students, 4th semester in Germany
3. 19 Masters‘ students in South Africa
4. X practitioners (developers) in South Africa
5. X practitioners (developers) in other countries

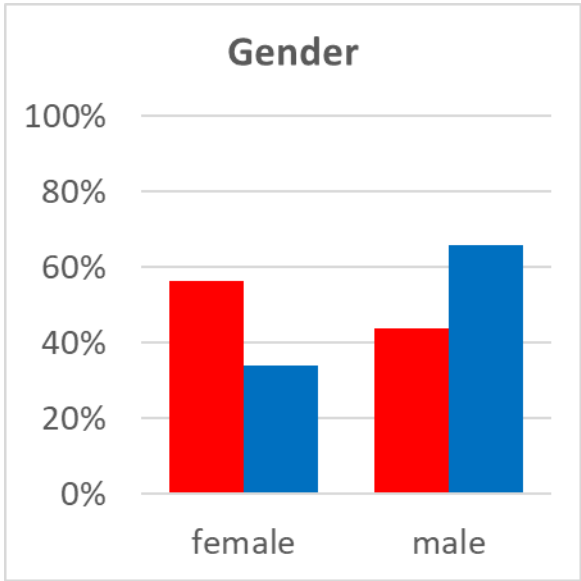


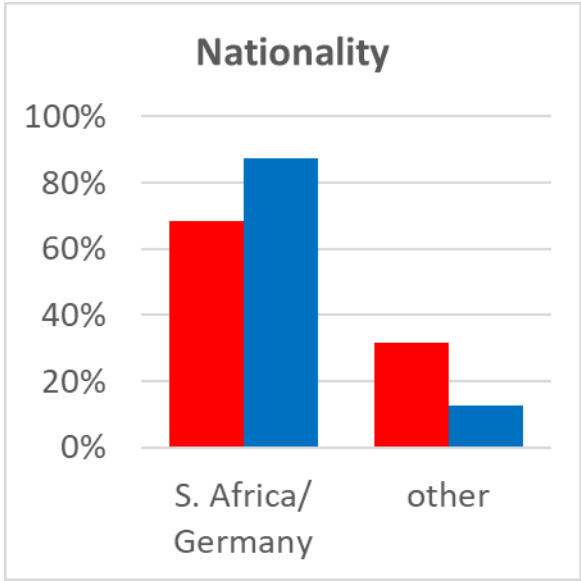
Biographical data

South Africa
Germany



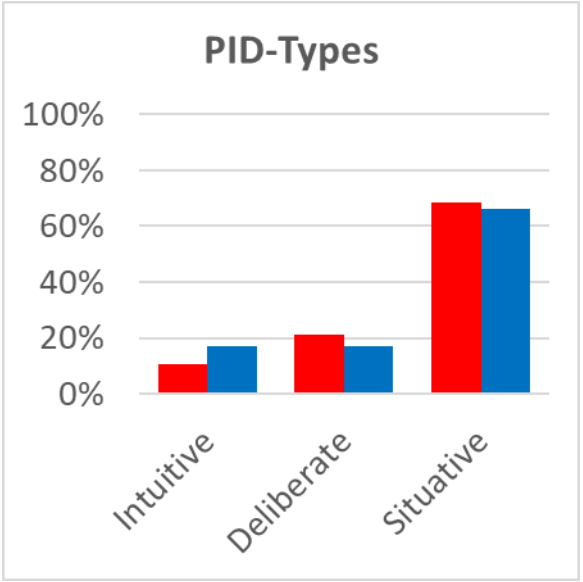


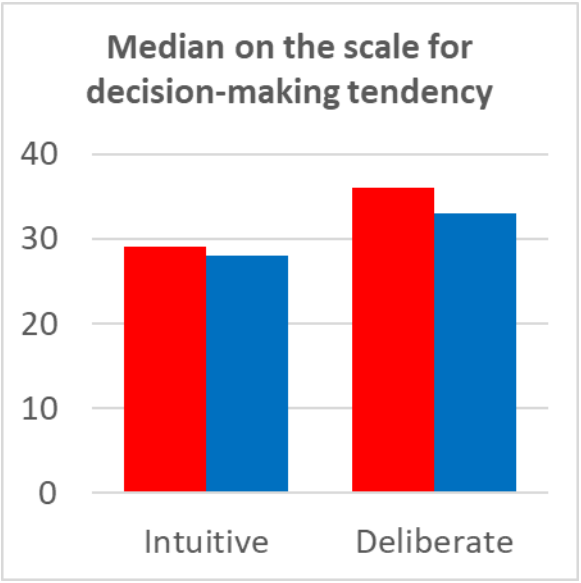




Preferences

- Calculation: PID-I total score for intuitive items above median and total score for deliberate items below median; PID-D = opposite
  S no clear tendency, decision depends more on the situation





South Africa
Germany

- Big majority of students do not show to a clear type
- Comparison with Lösch (2012): similar picture for students, but different with professionals (57% are either PID-I or PID-D)
- Interpretation: Shaping of personality not finished in the twenties; some students later work in areas that correspond to their personality, e.g., controlling for rational thinkers and (maybe) development for intuitive people

Differences between case scenarios

Variable	Intuitive scenario	Deliberate scenario
Number of pieces of information	Low	High
Economic figures	Few	Detailled
Correlation with personality inventory	• High speed of decison • Openness for experience • Extraversion	• Needs more time • Careful worker • Needs structure

„property development team quickly made up its mind …“

„business concept requires quick identification of opportunities…”

„bought the property 2 years ago…“

“business approach requires a thorough analysis and intensive search for the best solution …”

CoRE Campus of Real Estate

Differences between case scenarios

	Intuitive scenario	Deliberate scenario
Economic figures	Few	Detailled

Scenario DO NOT STOP

Sale	Gross annual income			R 6,500,000
	Cap rate			8%
	Sales price			R 81,250,000
Land	Purchase price		-R 12,000,000	
	Legal fees and other acquisition costs	5%	-R 600,000	-R 12,600,000
Building	Construction costs		-R 40,000,000	
	Ancillary construction costs	16%	-R 6,400,000	
	Cleanup costs		-R 6,000,000	-R 52,400,000
Others	Acquisition and building costs			-R 65,000,000
	Interest	4%	-R 2,600,000	
	Sales expenses	1%	-R 650,000	
	Risk	3%	-R 1,950,000	-R 5,200,000
	Total costs			-R 70,200,000
Profit				R 11,050,000
ROI = Profit : Total Costs				15.7%

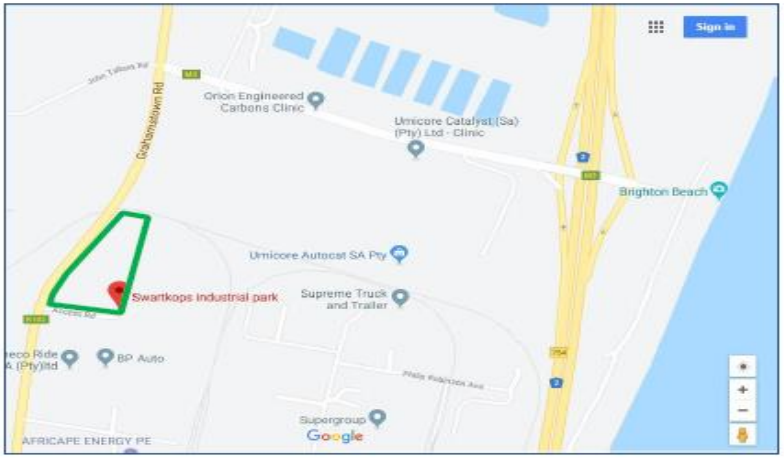
Scenario DO NOT STOP

Gross annual income		
Cap rate		
Sales price		R 81,250,000
Costs		
Purchase Price	-R 12,600,000	
Construction costs	-R 46,400,000	
Cleanup costs	-R 9,400,000	
Interest, sales expenses, risk	-R 5,472,000	
		-R 73,872,000
Profit		R 7,378,000
ROI = Profit : Total Costs		10.0%

Pictures from the intuitive scenario

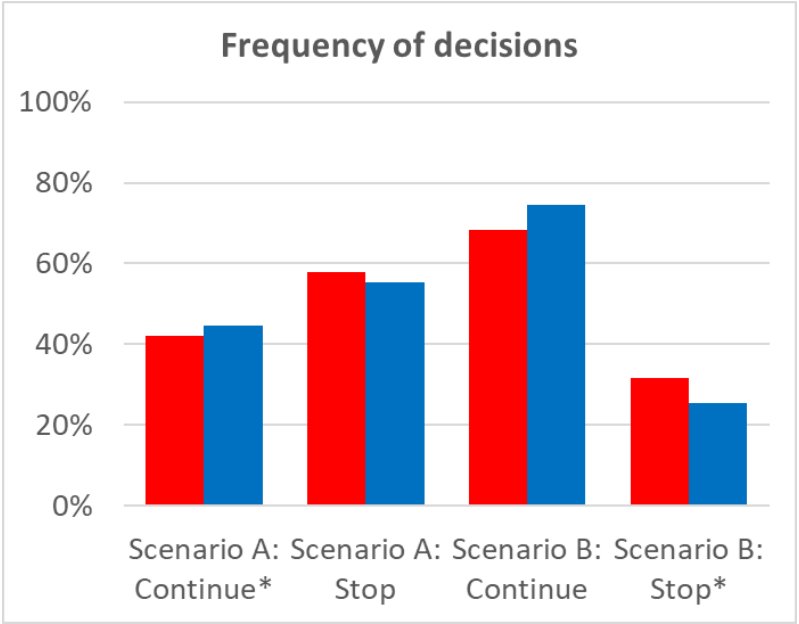
Arguments for/against stopping the project

FOR Stopping the project	AGAINST Stopping the project
• 10% estimated return way below required return of 20% • Remediation of contaminated site costs over R9 million = more than nine times higher than planned (and risk of further additional costs) • 3 other properties on the book that haven't been sold • Certain loss of R2 million bearable; will not endanger overall profit for the year and dividend payment to investors	• Good property and well located • Opportunity to strengthen image and participate in the design of a flourishing industrial location in PE • Good marketing opportunity → location potential already recognized by investors • Opportunities for more business • Area is strengthening • Potential to sell development to a REIT • Already invested a lot of time, money and reputation



Assumptions and results

Intuitive scenario (A)	Deliberate scenario (B)
Intuitive person decides to CONTI-NUE the project	Intuitive person decides to STOP the project
Deliberate person decides to the STOP project	Deliberate person decides to the CONTINUE project

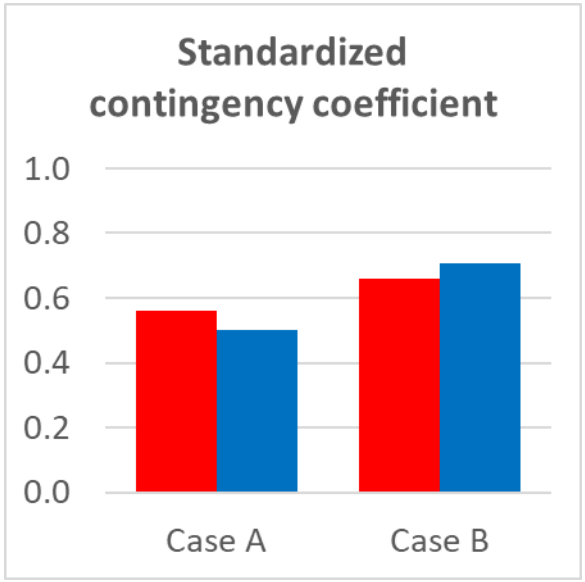


*= intuitive decision

- As intended both scenarios offered good reasons for and against a project stop.
- In Scenario B „CONTINUE“ was more popular among both types.
- Interpretation: Maybe the offered return was too attractive for stopping the project

Decision-making and PID type

- Two-dimensional contingency analysis to investigate the relation between decision-making behavior and personality type
- Results show moderate relation (Pearson‘s standardised contingency coefficient between 0.5 and 0.7)



South Africa

Germany

- Interpretation: Most respondents decide according to their personality type, independent of the situation

Results

- Evidence for the two hypotheses is inconclusive

  Few students are intuitive decision-makers, but there is a moderate relation between the personality type and the decision behavior
  → Intuition does seem to exert a strong influence on the decisions of property students

  → Many students seem to decide intuitively not only if the situation calls for an intuitive decision, but also if the situation allows a rational decision
- Validity of the survey is limited, but together with our previous work, interviews and the literature we conclude that **intution has *some* importance in real estate development decisions**
- Interesting:
  - Intuitive decision-makers seem to decide intuitively even if the situation calls for a deliberate decision (e.g., project return is below the required rate of return)
  - On average, test persons reach higher scores on the deliberation scale
  - No big differences between the two samples
- Further research necessary

Future Research

- Deeper analysis of the data
- Experiments with practitioners
- Experiments in other countries
- Larger sample
- Contextual nuances
- Other aspects of decision making in the Real Estate Sector
- Fine tuning of methodologies

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