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Title: Transaction modeling on e-Commerce

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# Introduction

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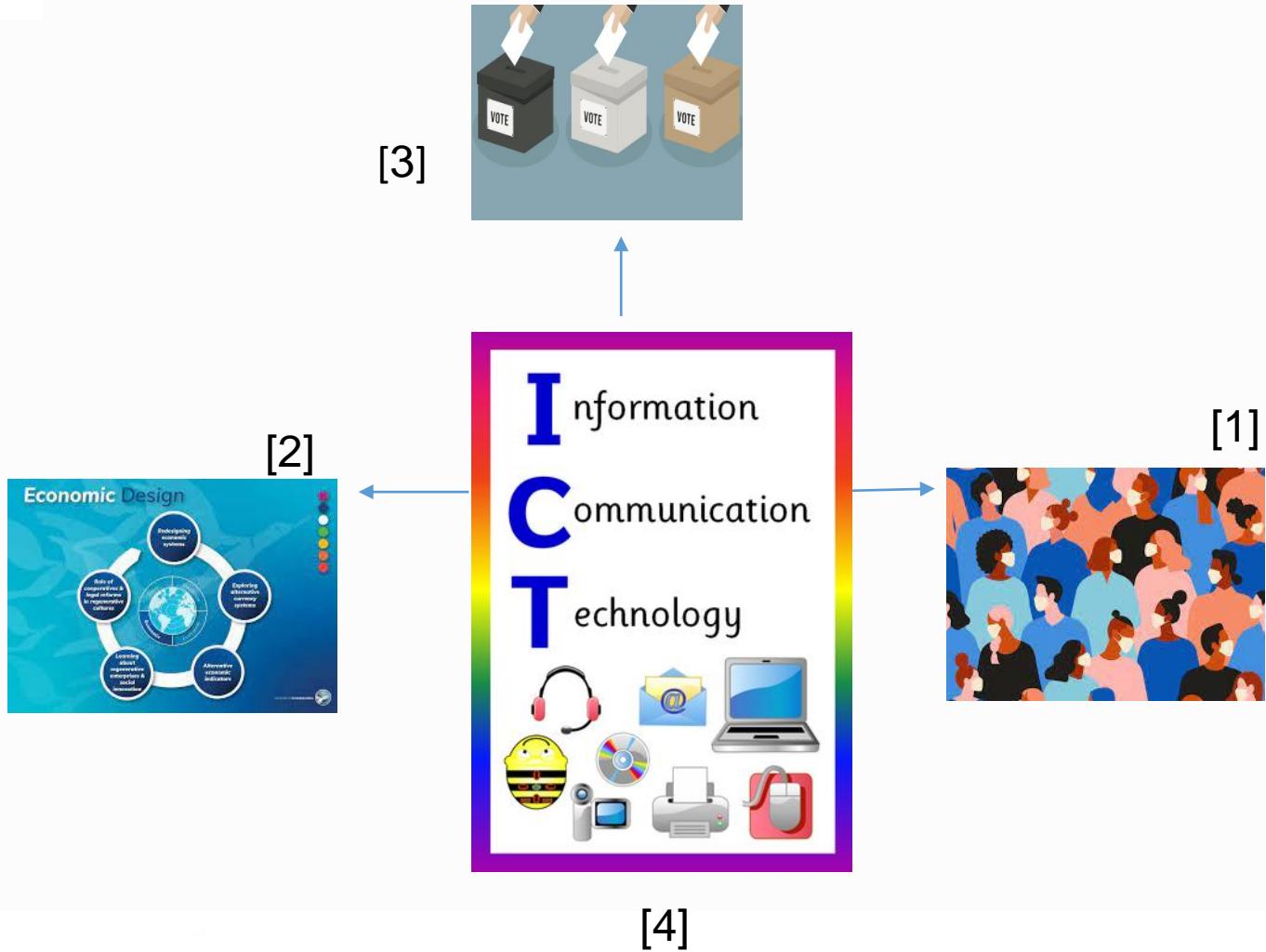
Background Glossary

Concept	Meaning	Equation
Greed state (*Gs*):	the emotional level at which a *consumer* (*Cmer*) is willing to buy a *product*.	
Product (*P*):	a service and/or object that is offered in the market.	
Consumer (Cmer)	the *entity* that acquires a *P* through a *purchase-sale transaction* (*pst*).	
Entity:	the organization or individual.	
Purchase-sale transaction (*pst*)	Process to pay with money and receive a *P* in exchange. To simplify the language, this will be called *transaction* only.	
Provider (*Pder*)	the entity that offers its *P* looking for a *pst* for said *P*.	

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Background Glossary

Concept	Meaning	Ecuation
eConsumer (eCmer) and *eProvider* (ePder)	In the context of *e-commerce*, the *Cmer* and *Pder* are online consumer and provider. They are called as *eConsumer* (eCmer) and *eProvider* (ePder) respectively.	
Or operator	logical operator that origin a false conclusion when the premises are false	

Conceptual Map Formalism
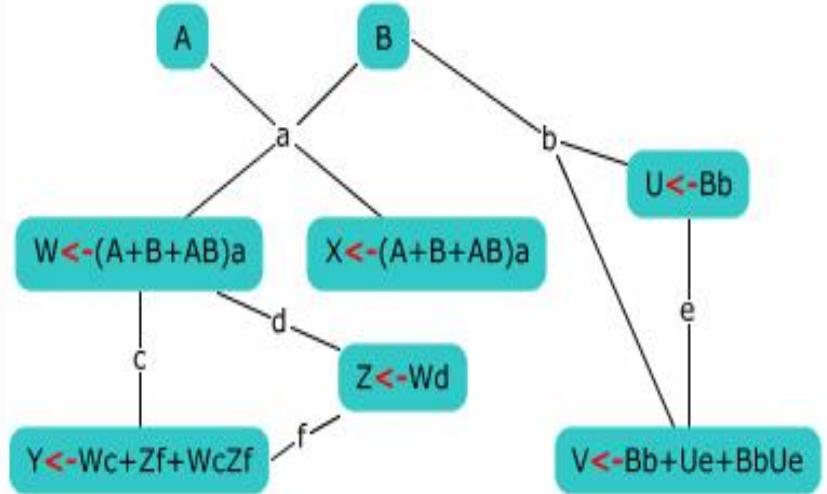
Logical *conceptual map* with arcs input criteria

Conceptual map formalism
Input criteria

$$W \quad \leftarrow \quad Aa \tag{3}$$
$$\leftarrow \quad Ba$$
$$\leftarrow \quad Aa + Ba$$
$$\leftarrow \quad Aa + (AB)a$$
$$\leftarrow \quad Ba + (AB)a$$

$$Aa \quad \equiv \quad aA \tag{4}$$
$$(AB)a \quad \equiv \quad AaBa$$

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Conceptual map formalism output criteria
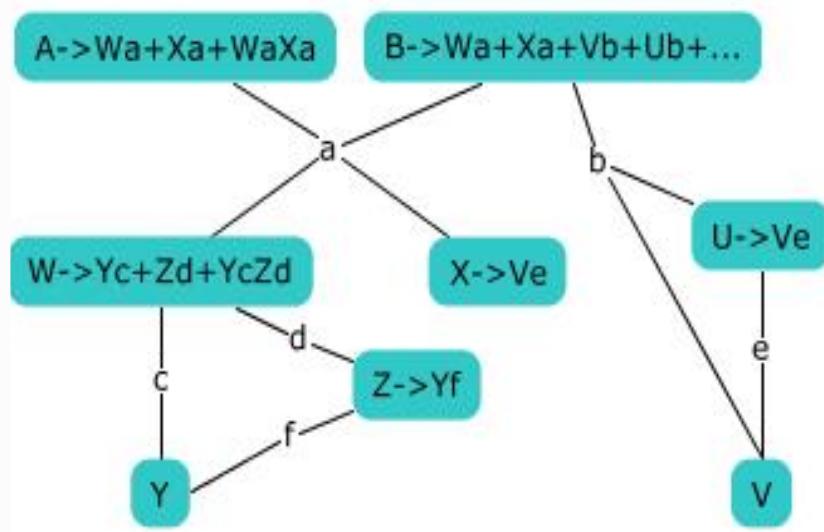
Logical *conceptual map* with arcs output criteria

# Conceptual map formalism output criteria
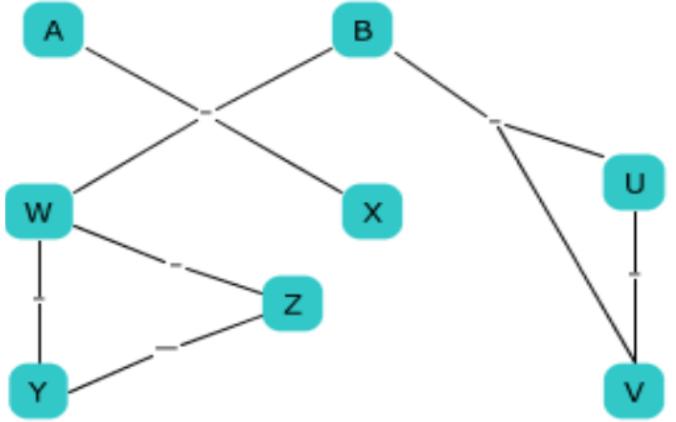
input arc to node			output arc from node		
Node	←	Eq	Node	→	Eq
A	←	…	A	→	…
⋮	⋮	⋮	⋮	⋮	⋮

Formal *conceptual map* representation

Transaction Modeling
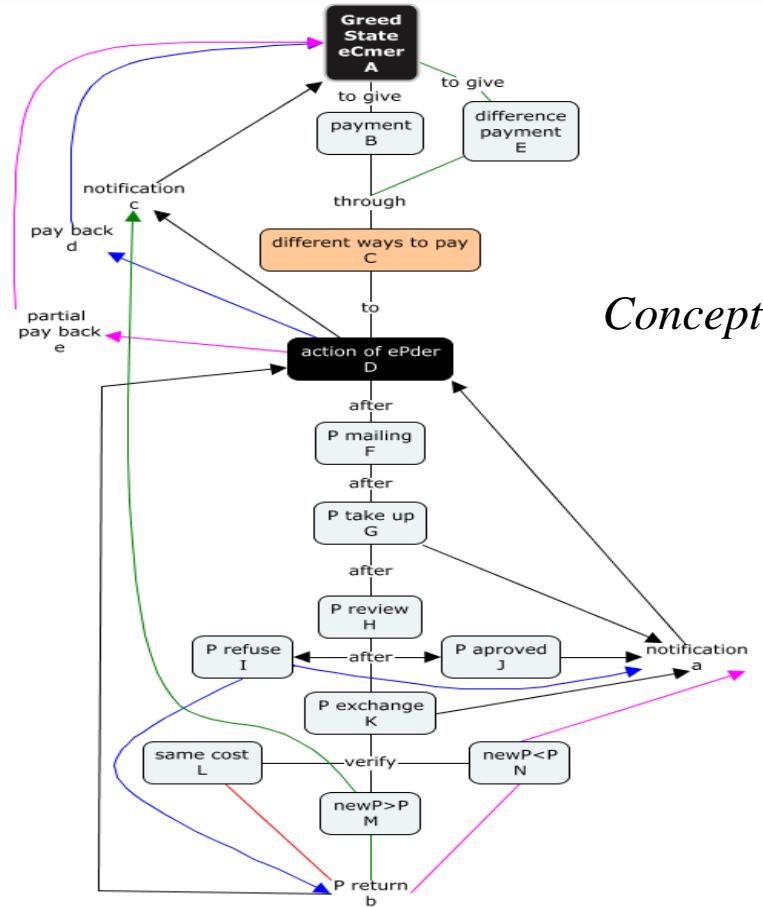
Conceptual map of *e-Commerce* transaction.

Transaction Modeling

Graph to represent the transaction

Transaction Modeling

Tree coverture of *e-Commerce* transaction
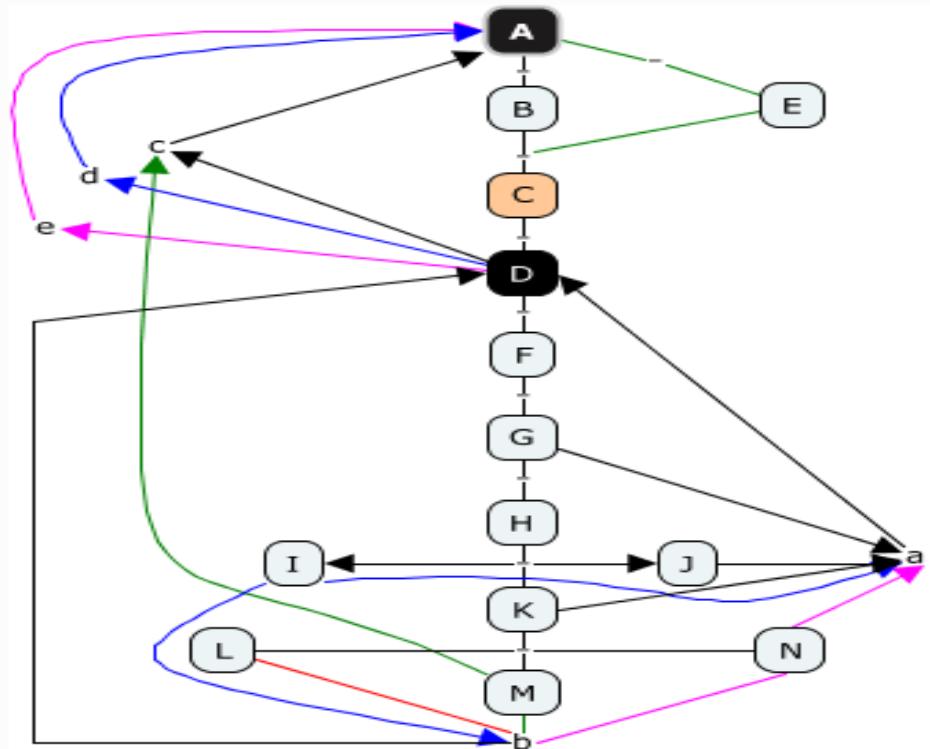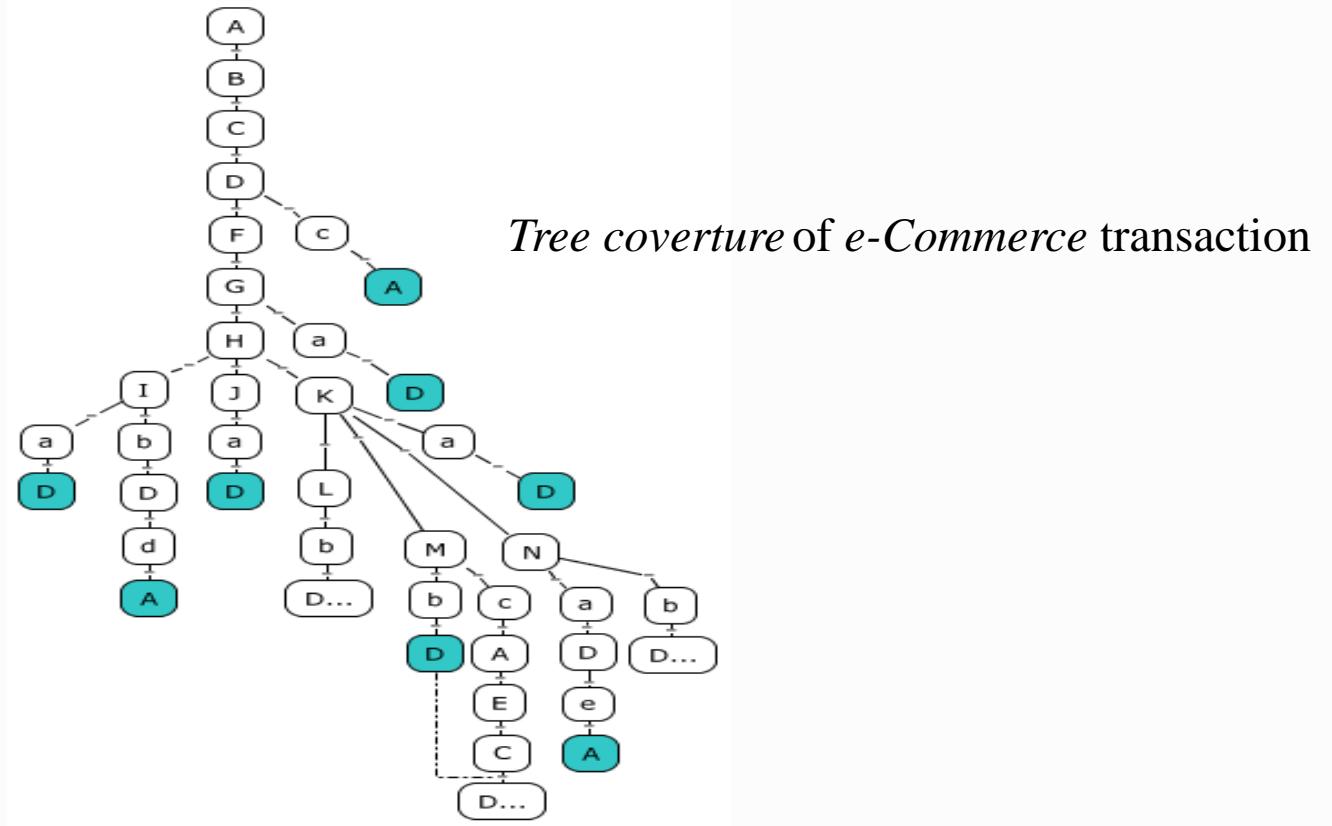
Transaction Modeling
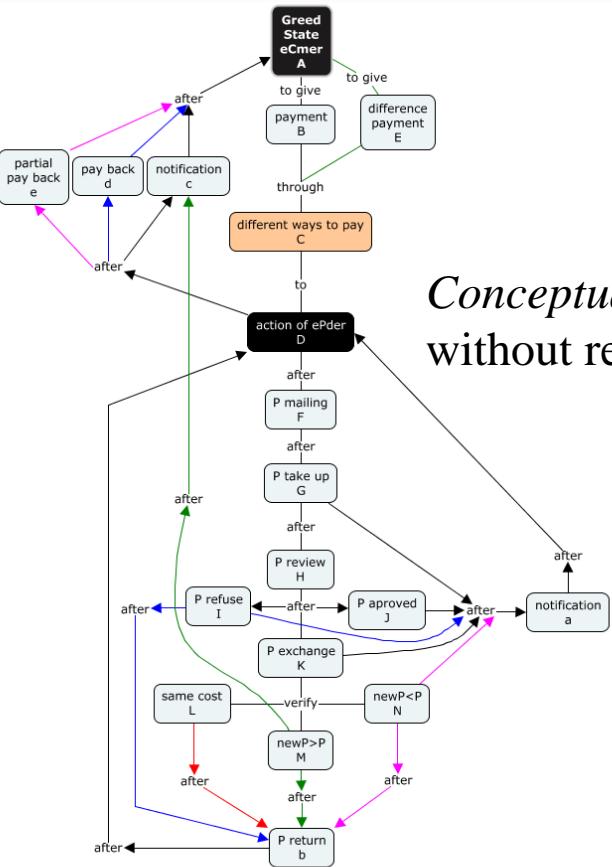
Conceptual map of e-Commerce transaction without relevant arcs.
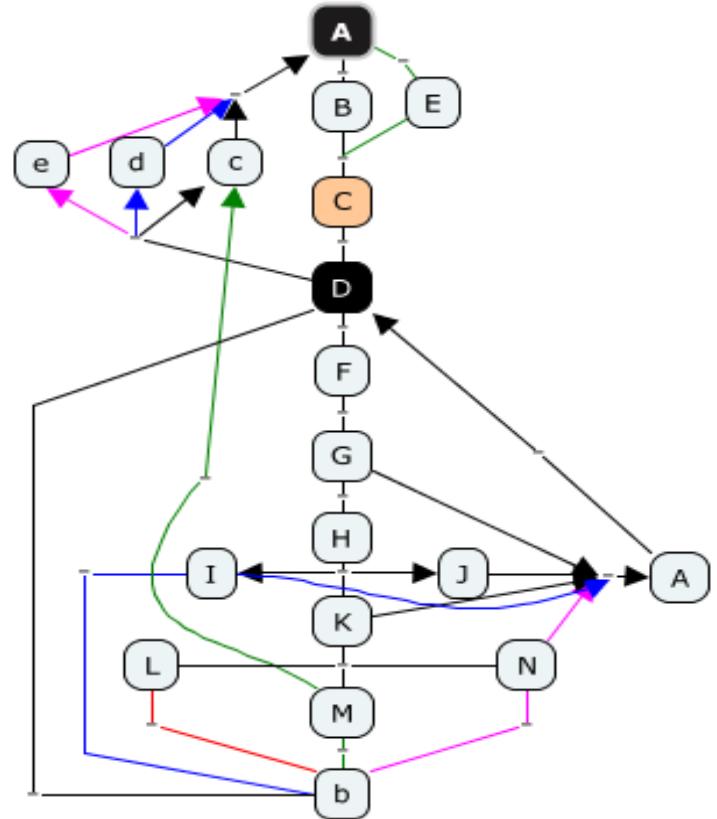
Graph to represent the transaction without relevant arc.

Conclusion?

- This paper presented a description of the elementary sale-purchase transaction. The transaction can be described using conceptual maps in an easy way, but this is not enough to analyze the process.
- The proposal is a formal model that facilitates his analysis.
- The model consists of a graph and equations of input and output from nodes. The work concludes with the model, but the research continues about the analysis method, modification method, and/or transform this to Petri net representation.
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Thematic

Transaction modeling on e-Commerce

¿Preguntas ?

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