



Doctoral thesis summary

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Full name	Osama Ahmed Nasreldin		
Title of the thesis	Using statistical copulas to measure dependence in the agrofood sector		
Structural unit	Agricultural Economics		
Programme	Sustainability		
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(Minimum 1 and maximum 4; see the codes at <https://doctorat.upc.edu/academic-management/formsfolder/thesis-registration-and-deposit/unesco-codes>)

Thesis summary of a maximum of 4,000 characters (if you exceed this number it will automatically cut you off).

This thesis has been pursued in three papers whose nexus is the use of statistical copulas for the purpose of assessing dependence in the field of agrofood economics. The first paper aims at determining how the introduction of agricultural revenue insurance contracts in Spain will affect the cost of purchasing insurance, relative to yield insurance schemes. The empirical analysis focuses on the apple and orange sectors in Spain. Statistical copulas are used to jointly model price and yield perils. Monte Carlo simulation methods are employed to simulate premium rates both under revenue and yield insurance. Results indicate that revenue insurance is likely to reduce the price of agricultural insurance in Spain, which may result in higher acceptance and demand for agricultural insurance programs.

The second paper aims to study dependence between producer and consumer prices for millet markets in Niger. Links between prices considered are assessed by cointegration analysis and statistical copula methods. Results indicate a positive link between producer and consumer prices, which is stronger the closer the markets are. Evidence of asymmetric price behavior is also found.

The last paper assesses price transmission along the Egyptian tomato food marketing chain in the period that followed the Arab Spring. Static and time-varying copula methods are used for this purpose. Results suggest a positive link between producer, wholesaler and retail tomato prices. Such positive dependence is characterized by asymmetries during extreme market events, which lead price increases to be transferred more completely along the supply chain than price declines.

Place	Bracelona	Date	04/09/2014
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Signature