



Università
Ca'Foscari
Venezia

PROJECT ACRONYM AND TITLE: Traditional Industries and the Fourth Industrial Revolution: New Trends in the Creation and Protection of Innovation in the Global Automotive Industry

FUNDING PROGRAMME: European Patent Office (EPO) - Academic Research Programme

CALL: Academic Research Programme 2018

SCIENTIFIC FIELD: Patents, Fourth Industrial Revolution

HOST DEPARTMENT/CENTRE: DMAN - Department of Management

SCIENTIFIC RESPONSIBLE: Alessandra Perri

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
€ 61,400.00	€ 61,400.00

ABSTRACT:

The extraordinary pace of innovation in digital-related technological cores experienced in the Fourth Industrial Revolution (4IR) has raised compelling questions about the opportunities and challenges for the actors involved. This project aims to investigate how the emergence and growing centrality of 4IR-related technologies modifies the relative competitive positions of incumbents and new entrants in a traditional industry, as well as their respective knowledge sourcing, creation and protection strategies and the resulting patenting behaviour. In doing so, the project explores and characterizes the nature of technological knowledge underpinning 4IR-related innovations. More specifically, the project aims at addressing the following research questions:

- (i) how and to what extent is the evolution of technologies underpinning the 4IR modifying the knowledge eco-system of traditional industries?
- (ii) how are competitive dynamics linked to innovation and knowledge generation changing the relative position of incumbents and new entrants in traditional industries?
- (iii) how are incumbents changing their vertical network of suppliers in order to source relevant external knowledge and remain competitive in the shift towards the 4IR paradigm?
- (iv) how and to what extent does the patenting behaviour of firms' operating at different stages of an established industry's value chain change as a consequence of 4IR innovation trends?

The empirical setting chosen for the analysis is the largest manufacturing industry in the world, i.e. the global automotive industry. The 4IR paradigm forces the industry original equipment manufacturers (OEMs) to adjust to the rapidly changing scenario to remain competitive: the expansion of the range of relevant technological domains and the emergence of a new "distributed innovation" model represent some of the main challenges of the industry.

The project will offers fresh evidence about the strategic, innovative and organizational dynamics spurred by the 4IR in a traditional industry. More specifically, the project will not only provide a longitudinal analysis of the global automotive industry’s knowledge base, but will also allow to detect the emergence of new entrants responsible for the generation and diffusion of 4IR-related technologies, and their patenting behaviour. This will informs policy making in the design of (1) appropriate incentive plans to foster the development of innovation competences in key 4IR-related technologies; (2) appropriate incentive plans for the development of collaborative innovation in traditional industries; (3) appropriate institutional and legal frameworks that ensure an effective leverage of intellectual property rights in emerging technological fields.

The project also has significant implications for industry practitioners, who will be able to gain better understanding of (1) the changing dominant positions in the generation of innovation; (2) the most successful organizational arrangements for sourcing knowledge that is “external” to the industry core technologies; (3) the key emerging technological fields spurred by 4IR and their relation to and combination with more traditional knowledge areas; (4) the evolution of patenting strategies in the industry.

Start date	End date
11/01/2019	10/07/2020
PARTNERSHIP:	
1 Università Ca’ Foscari Venezia	Venice (IT) Coordinator