

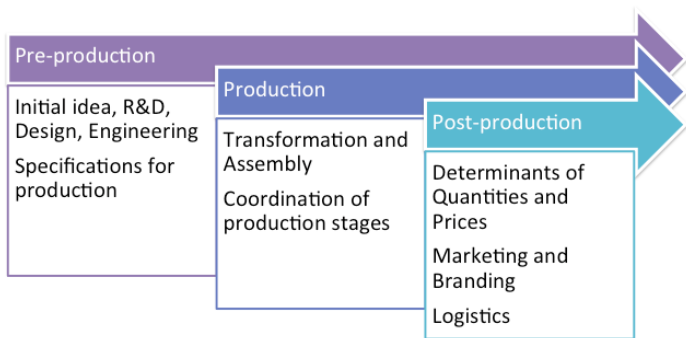
Discussion of:  
A Portrait of US Factoryless Goods Producers  
*by Fariha Kamal*

Teresa Fort  
Dartmouth Tuck & NBER

2018 CRIW: Measuring Globalization

*Disclaimer:* This work is unofficial and thus has not undergone the review accorded to official Census Bureau publications. All results have been reviewed to ensure that no confidential information is disclosed. The views expressed in the paper are those of the author and not necessarily those of the U.S. Census Bureau.

# What is factoryless goods production?



- Performance of pre and post production activities
- No (or minimal) physical transformation activities

# How are factoryless goods producers defined?

- Economic Classification Policy Committee FGP establishment:
  - ▶ Outsources physical transformation activities
  - ▶ Undertakes all of the entrepreneurial steps for production
  - ▶ Arranges for all required capital, labor, and material inputs
- Bernard and Fort FGP definitions
  - ▶ Wholesale estab designs product and involved with manufacturing
  - ▶ FGP firm has 1+ FGP estabs and no manuf plants
- Kamal FGP definition
  - ▶ Broad: firm or estab reports CMS purchases
  - ▶ Restricted: firm and estabs *both* report CMS purchases

# Hypothetical Examples of Contract Manufacturing Services

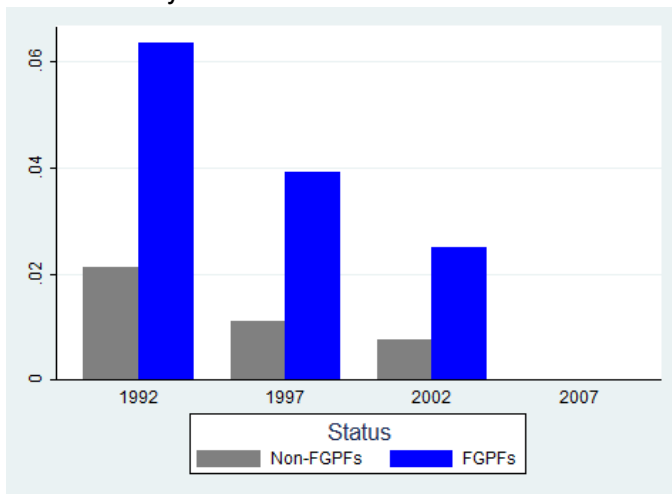
- Manufacturing of MP-3 player components designed and specified by Banana Electronics
- Processing of semiconductors in Intelium's plants in Costa Rica
- Assembly of Athena's shoes in non-affiliated factories using soles provided by Athena
- Does NOT include "off-the-shelf" inputs

# Why do we care about FGPs?

- Census Bureau: accurate measures of economic activity
  - ▶ NAICS is based on establishment production process
  - ▶ Heterogeneity in how FGPs classified across sectors
- Bureau of Economic Analysis:
  - ▶ Input-output table metrics
  - ▶ Correct national accounts
- Broader research community
  - ▶ New type of production function
  - ▶ Specialization in innovation
  - ▶ Evolution of US manufacturing?

# 2007 FGPs more involved in manufacturing in the past

## Manufacturing Employment Shares by 2007 FGP Status and Year



From Bernard and Fort (2015)

# Comment 1: Outsourcing versus fragmentation

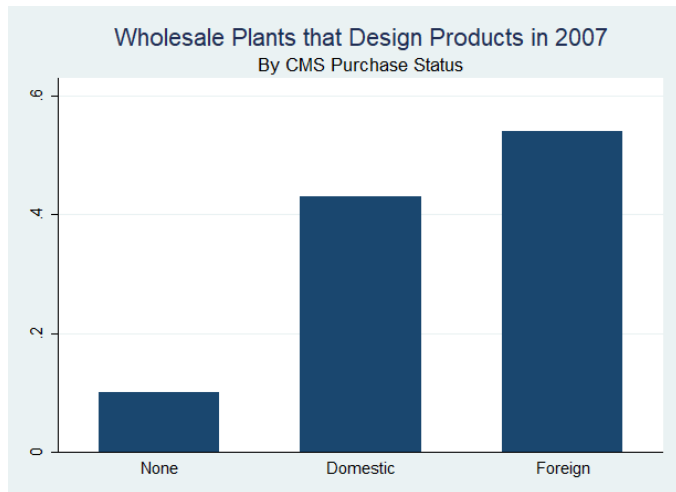
- Estabs can purchase CMS within the firm (2007 CMF & CWH)
- Current questions ask about CMS purchases
  - ▶ From other companies
  - ▶ From foreign plants of your company
- Current questions drop domestic fragmentation within firm
  - ▶ Perhaps at the firm level this is hard to track?
  - ▶ Still important for many questions on specialization

## Comment 2: Plant versus firm-level responses

- 40% disagreement between firm and estab level data
  - ▶ Most due to plants that purchase CMS
- Is this noise or information?
  - ▶ How do disagreement plants compare to population?
  - ▶ Which type of firm-level CMS purchases agree most?
  - ▶ What is *value* share of CMS purchases by agreement status?
- Firm-level question explicitly asks about incorporating firm IP
  - ▶ Do IP differences suggest this as explanation?
  - ▶ Do estabs know more about operational detail of CMS purchases?
  - ▶ Do firms know more about what estabs are doing?

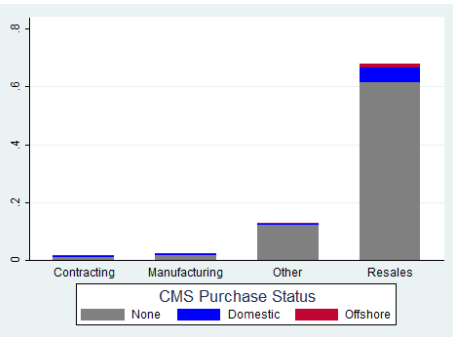


## Comment 3: Is IP creation necessary for FGP status?

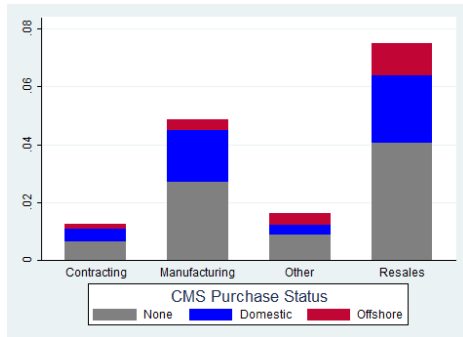


- Paper finds that FGP firms innovate more
- This is also true at the plant level

# Innovation is correlated with manufacturing activities



(a) No Design at Plant (84.8%)



(b) Design at Plant (15.2%)

- Should innovation be a criteria for FGP status?
- How many FGPs get missed using only CMS criterion?

## Comment 4: Addressing sample selection

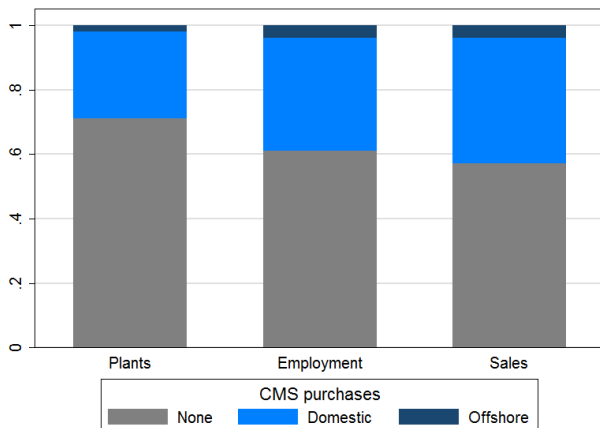
Table: Plant Shares and Characteristics by Response Status

	Participation Shares			Sales	Means	
	Plants	Sales	Emp		Emp	ln(VAP)
In CMS Sample	0.54	0.75	0.71	<b>36,778</b>	<b>86</b>	<b>4.56</b>
Out of CMS Sample						
Not Answered	0.21	0.23	0.24	<b>29,548</b>	<b>77</b>	<b>4.61</b>
Not Asked	0.25	0.02	0.05	2,314	13	4.25
No Info	0.00	0.00	0.00	21,147	61	4.75
All Manufactures	1.00	1.00	1.00	26,638	66	4.50

*Notes:* Excludes administrative records. CMS questions only asked on CMF long form.

- Non-respondents systematically smaller and less productive
- Need to address sample selection

# Plant participation shares by fragmentation status



- Fort (2017) finds low CMS purchase shares
- Similar patterns within industries and in wholesale
- Are higher shares in this paper due to selection?

## Comment 5: Very exciting paper! Tell us more!

- Main sectors for FGP activity
- Intensity of FGP purchases
- CMS from foreign subsidiaries versus domestic firms

# Concern about inconsistent classification systems

- 31331 Textile and Fabric Finishing Mills

This industry comprises (1) establishments primarily engaged in finishing of textiles, fabrics, and apparel, and (2) **establishments of converters who buy fabric goods in the grey, have them finished on contract, and sell at wholesale.**

- 541512 Computer Systems Design Services

This U.S. industry comprises establishments primarily engaged in **planning and designing computer systems** that integrate computer hardware, software, and communication technologies. **The hardware and software components of the system may be provided by this establishment** or company as part of integrated services or may be provided by third parties or vendors.