

# The unintended consequence of an export ban: Evidence from Benin's shrimp sector

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- Methodology:
  - ① Open-economy demand-supply model
  - ② Analysis of macro & household survey data as well as structured qualitative interviews

# Outline

## 1 Background



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## ③ Concluding Remarks

# Part I

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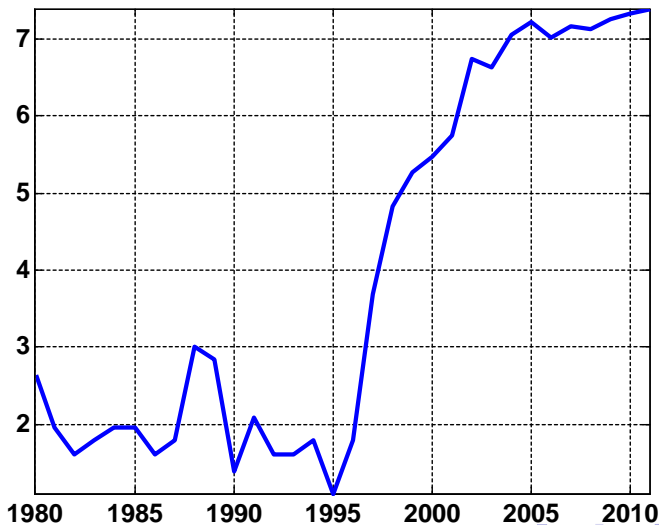
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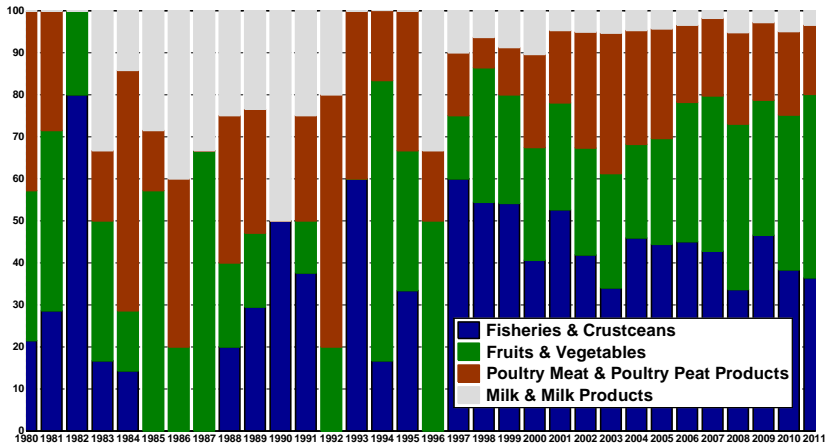
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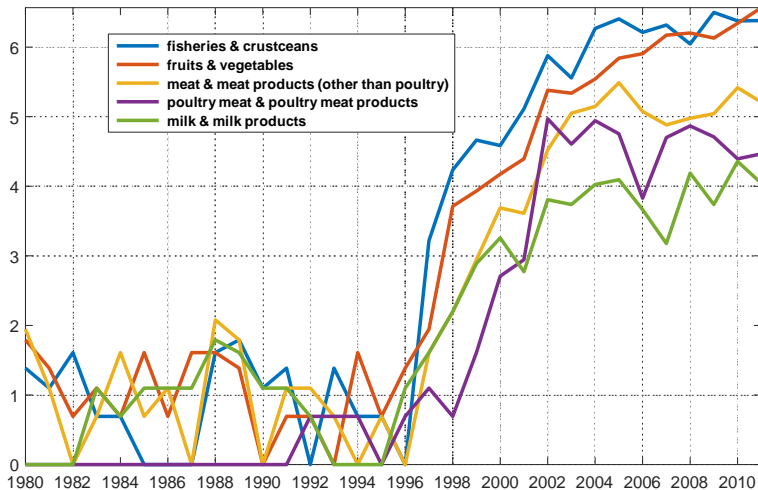
# Rapid Alert System for Food and Feed (RASFF, log)



# RASFF across goods (% Total)



# RASFF across goods (log)



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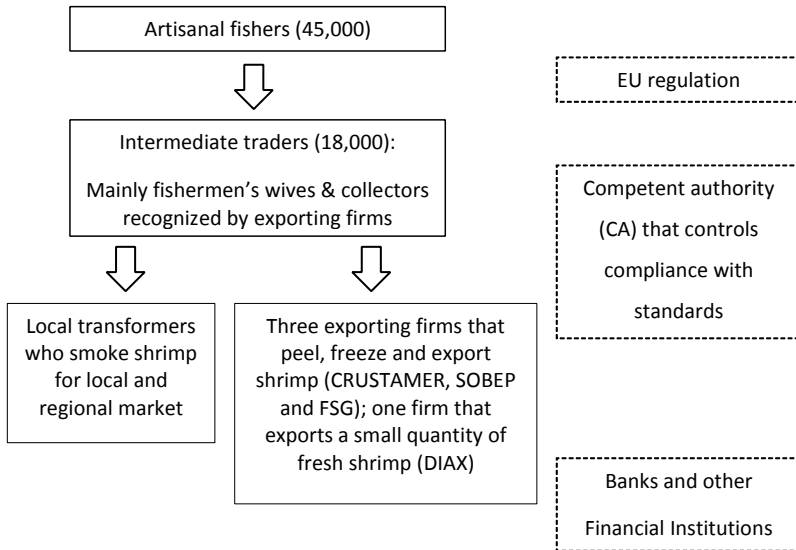
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- Higher net export earnings compared to manufacturing
  - Inputs are from domestic origins
  - Connect the rural economy to the global economy

# Benin's inland shrimp supply chain (2002)



# Deficiencies revealed by an EU mission (October 2002)

- ① Shortcomings in Benin's legislation;
- ② Lack of human resources and EU-accredited laboratories;
- ③ Non-conform use of chlorine and additives;
- ④ Non-application of Hazard Analysis Critical Control Points;
- ⑤ Bad practices with respect to hygiene and the environment.



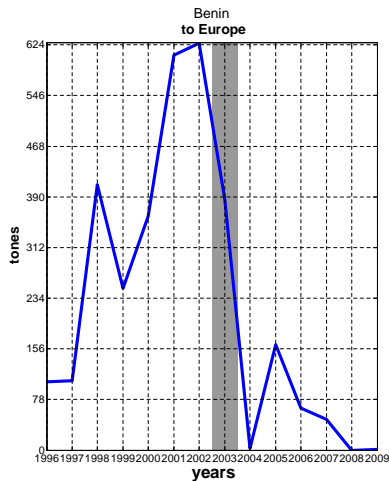
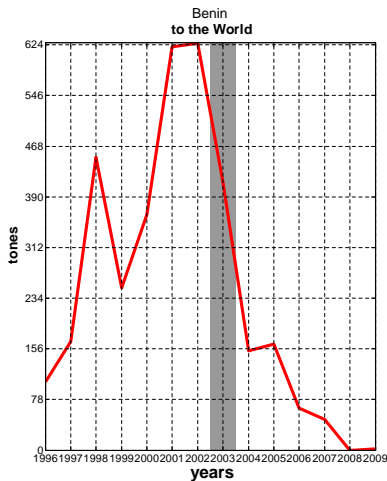
# CTB supports, local actors' effort, ban was lifted



## Part II

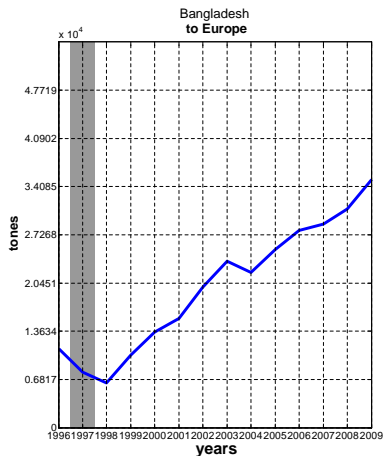
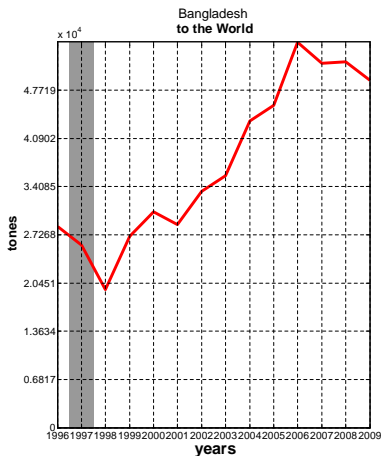
### Impacts of the Ban: Firms

# Dynamics of Benin's Shrimp Exports (tones)



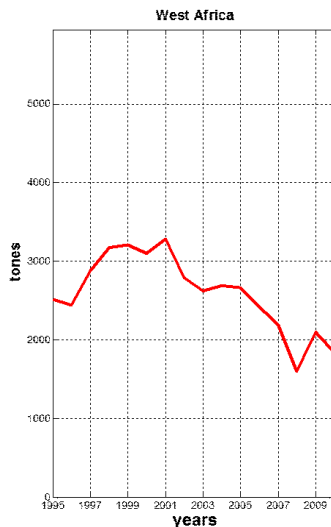
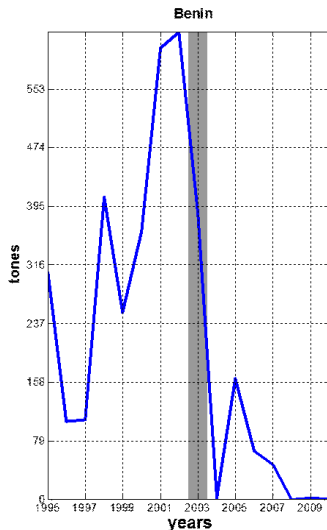
Note: The grey area shows the year of the ban

# Dynamics of Bangladesh's Shrimp Exports (tones)



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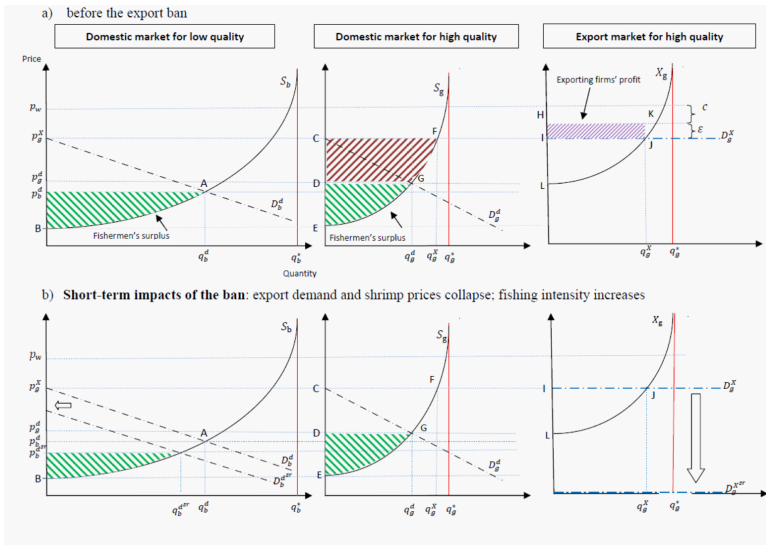
# Shrimp exports to the EU (tones)



## Part III

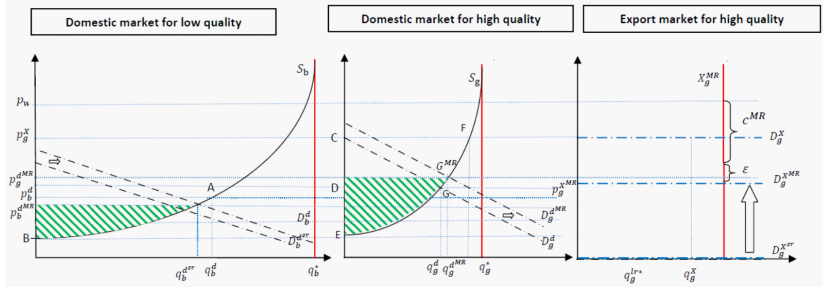
### Impacts of the ban: Small-scale actors

# Short-run impacts of the ban



# Medium-run impacts of the ban

c) **Medium-run impacts of the ban:** domestic demand expands but limited; at high costs export firms cannot break-even





# Field work

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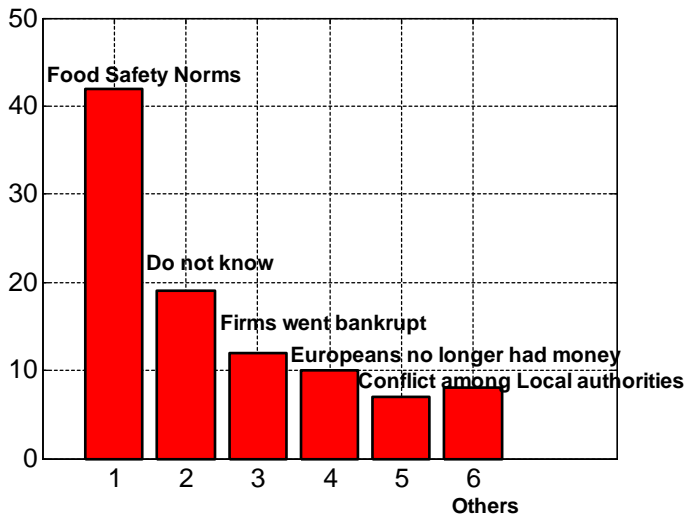
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- 540 HH, about 2000 Individuals

# Household Survey Data in 2009 (so-ava)

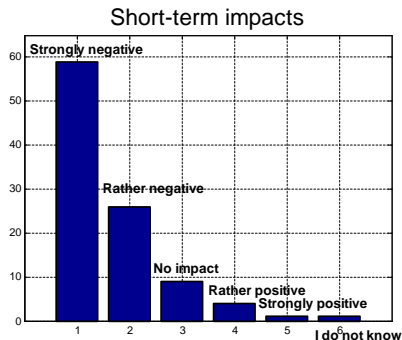


# What was the cause of the ban (percent)



# Short- and medium-term impact (percent)

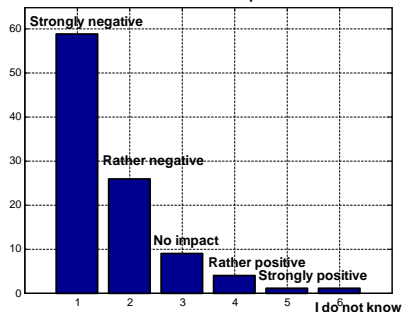
- What impact did the ban have on income in 2003 and in 2009?



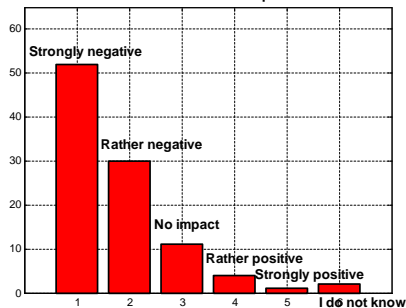
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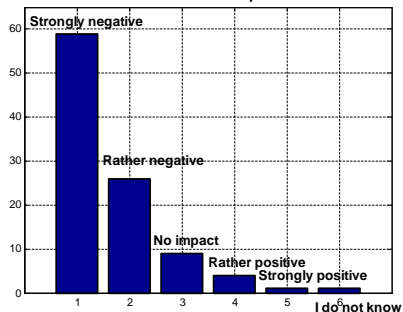
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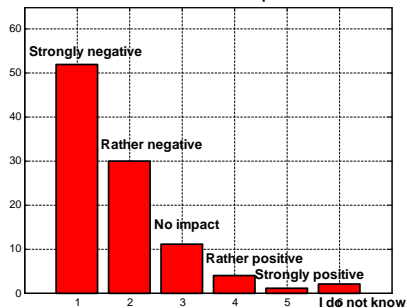
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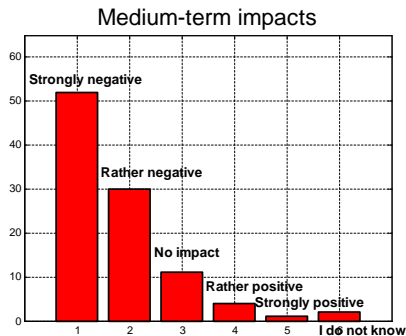
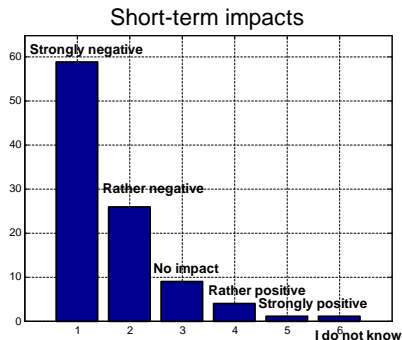


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# Short- and medium-term impact (percent)

- What impact did the ban have on income in 2003 and in 2009?



- Low price for negative impact
- Lack of markets

# Determinants of the ban's income effect, short-run and medium-run

Dependent variable: very negative impact	Short run (2003)		Medium run (2009)	
	Fishermen	Fishmongers	Fishermen	Fishmongers
Years of schooling	-0.027 (0.023)	0.014 (0.040)	0.004 (0.023)	-0.070** (0.035)
Involved in shrimp sector in 2003	0.554*** (0.211)	0.285 (0.283)	0.226 (0.204)	0.299 (0.275)
Lake fixed effects	Yes	Yes	Yes	Yes
Obs	422	322	422	322

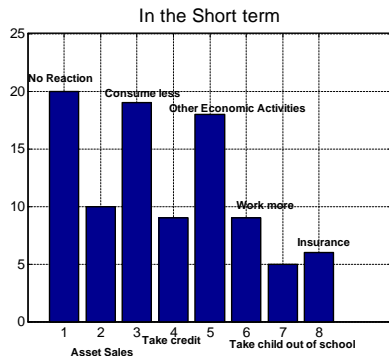
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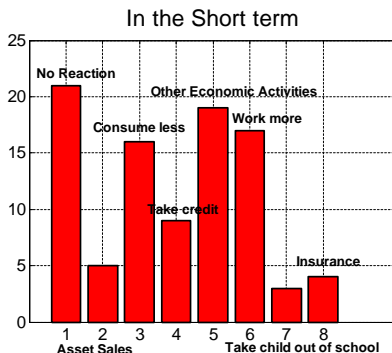
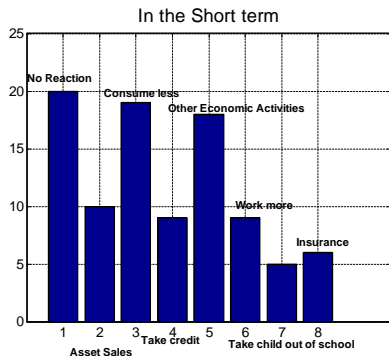
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- In the short run, the impact of the ban was more negative for shrimp fishers
- In the medium run, there is no significant difference of the ban's impact on shrimp and fish fishers

# Coping Strategies (percent)



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# Income diversification, migration, and the ban's income effect

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Years of schooling	0.009 (0.023)	-0.063* (0.035)	0.009 (0.023)	-0.063* (0.035)	-0.029 (0.023)	0.015 (0.041)
Involved in shrimp sector in 2003	0.249 (0.206)	0.232 (0.273)	0.186 (0.211)	0.229 (0.274)	0.503** (0.216)	0.263 (0.283)
Coping strategies 2009:						
Diversify into fish fishing or trading	0.001 (0.216)	-0.363 (0.256)	0.068 (0.222)	-0.357 (0.256)	0.286 (0.226)	-0.340 (0.265)
Diversify out of fishery sector	-0.940*** (0.331)	-1.146*** (0.311)	-0.942*** (0.332)	-1.135*** (0.311)	0.260 (0.364)	-0.249 (0.301)
Household members migrated for work			-0.252* (0.133)	0.013 (0.142)	-0.034 (0.101)	-0.021 (0.142)
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## Very Incomplete Infrastructure Work





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- At the level of small-scale actors
  - ① decline of both price and quantities demand

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    - ③ Export concentrated on EU markets
  - At the level of small-scale actors
    - ① decline of both price and quantities demand
    - ② limited access to alternative income sources

# Concluding Remarks

- The ban has had persistent negative welfare impacts because
  - At the macro level
    - ① poor institutional environment in Benin
    - ② the relative small size of the sector
    - ③ Export concentrated on EU markets
  - At the level of small-scale actors
    - ① decline of both price and quantities demand
    - ② limited access to alternative income sources
    - ③ Overfishing