

Wyoming Worker Commuting Patterns

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Topics

- Who We Are...
- Background
- Model Applications
- What Are Commuting Patterns?
- Datasets and Variables
- Methods & Capabilities
- Terminology
- Examples
- Conclusion/Questions





Who We Are...

- **Our Organization:** R&P is a separate, exclusively statistical entity.
- **What We Do:** R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.
- **Our Customers:** LMI makes the labor market more efficient by providing the public and the public's representatives with the basis for informed decision making.





Background

- Originally developed in response to a request from Teton County regarding bus service
- Updated in 2006 to use latitude and longitude for residence and work locations to calculate distances
- Updated in 2008 to integrate commuters from Colorado to Wyoming





Potential Applications

- Defining regional economies
- Re-employing the unemployed (e.g., how far are they willing to commute for work)
- Worker safety and first responder impacts by integrating with WYDOT vehicle crash file





Applications

- City of Gillette (unpublished)
- Cheyenne Metropolitan Planning Organization Study
 - http://doe.state.wy.us/lmi/cheyenne_mpo_08.pdf
- The Road to Work
 - <http://doe.state.wy.us/lmi/commute.pdf>
- Wyoming Planning Association
 - <http://doe.state.wy.us/lmi/wyopass091307.pps>
- Teton County (first study)





What are commuting patterns?

- Link place of work to place of residence
- Estimates based on a model





Datasets Used

- Multiple Datasets & Key Variables

- Wyoming Drivers' Licenses (SSN, Residence Location, Demographics)*
- Colorado Drivers' Licenses (SSN, Residence Location)*
- Unemployment Tax Detail Files (SSN, Wages, Employer IDs)
- Employer File (Employer ID, Industry, Work Location)*
- Unemployment Claims Files (SSN, Claim Date)
- Workers' Compensation Claims File (SSN, Claim Date)





Key Model Variables

- Distance
- Worker demographics
 - Sex
 - Age
- Wages earned
- Industries worked
- Tenure with employer and experience in industry
- State of origin
- Work and residence location





Method

- Use work and residence addresses to calculate distance
 - Latitude & Longitude
- Workers assigned to location as follows:
 - Minimum distance
 - If Distance Not Available or Equal among multiple records
 - Statistical Algorithm





Additional Model Capabilities

- Analyses by any combination of....
 - Age
 - Sex
 - Industry
 - Distance travelled
 - Custom time spans
 - Current model 2000Q1 – 2009Q2
 - Can analyze longer spans if needed
 - States of origin
 - Cities and counties of residence in Colorado for Wyoming workers





Commuting Terminology

- Inter>>>>>>”Between”
- Intra>>>>>>”Within”
- Inflow and Outflow
– It’s all relative!





Example

Pat lives in
Cody



Retail Job in
Cody



Landscaping
Job in Powell





Concept Review...

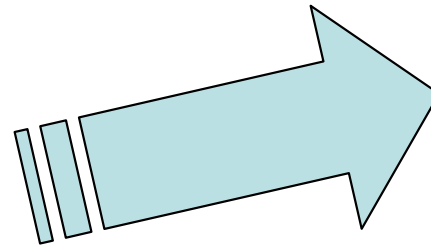
- Which job(s) involve intercounty commuting?
 - Neither: Pat did not cross county lines
- Which job(s) involve intercity commuting?
 - Landscaping job: Pat drove from Cody to Powell
- Which job(s) involve intracounty commuting?
 - Both jobs: All of Pat's activity within Park County
- Which job(s) involve intracity commuting?
 - Retail job: Pat lives in Cody and job is in Cody



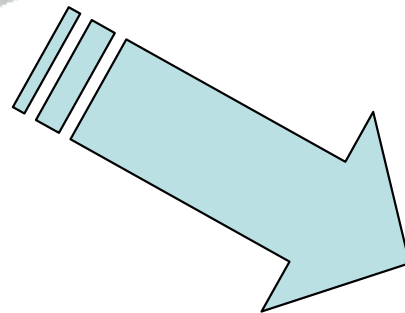


From a Powell or Cody Perspective: Which is Inflow? Outflow? Intraflow?

Pat lives in
Cody



Retail Job
in Cody



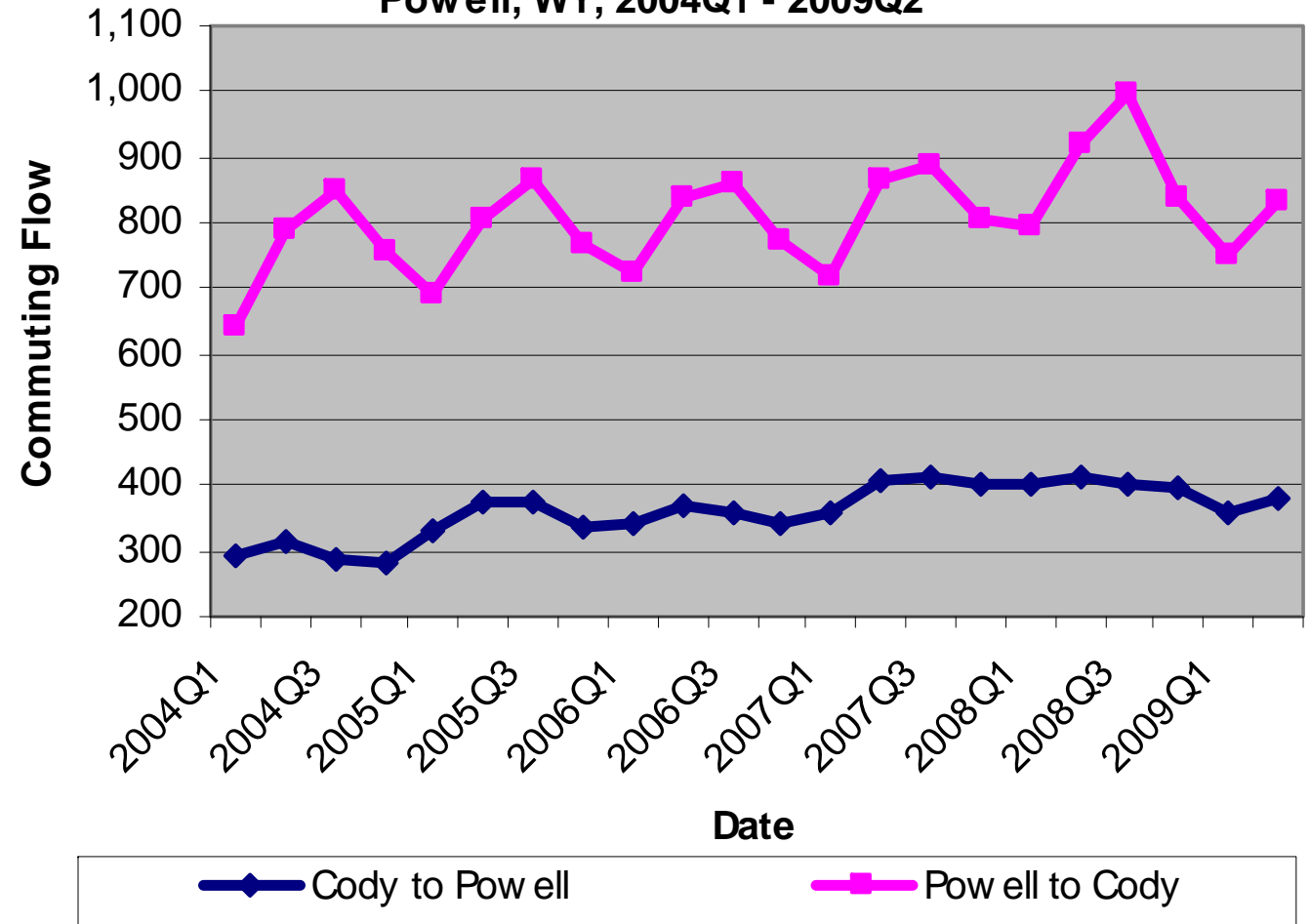
Landscaping
Job in Powell





Intercity Commuting

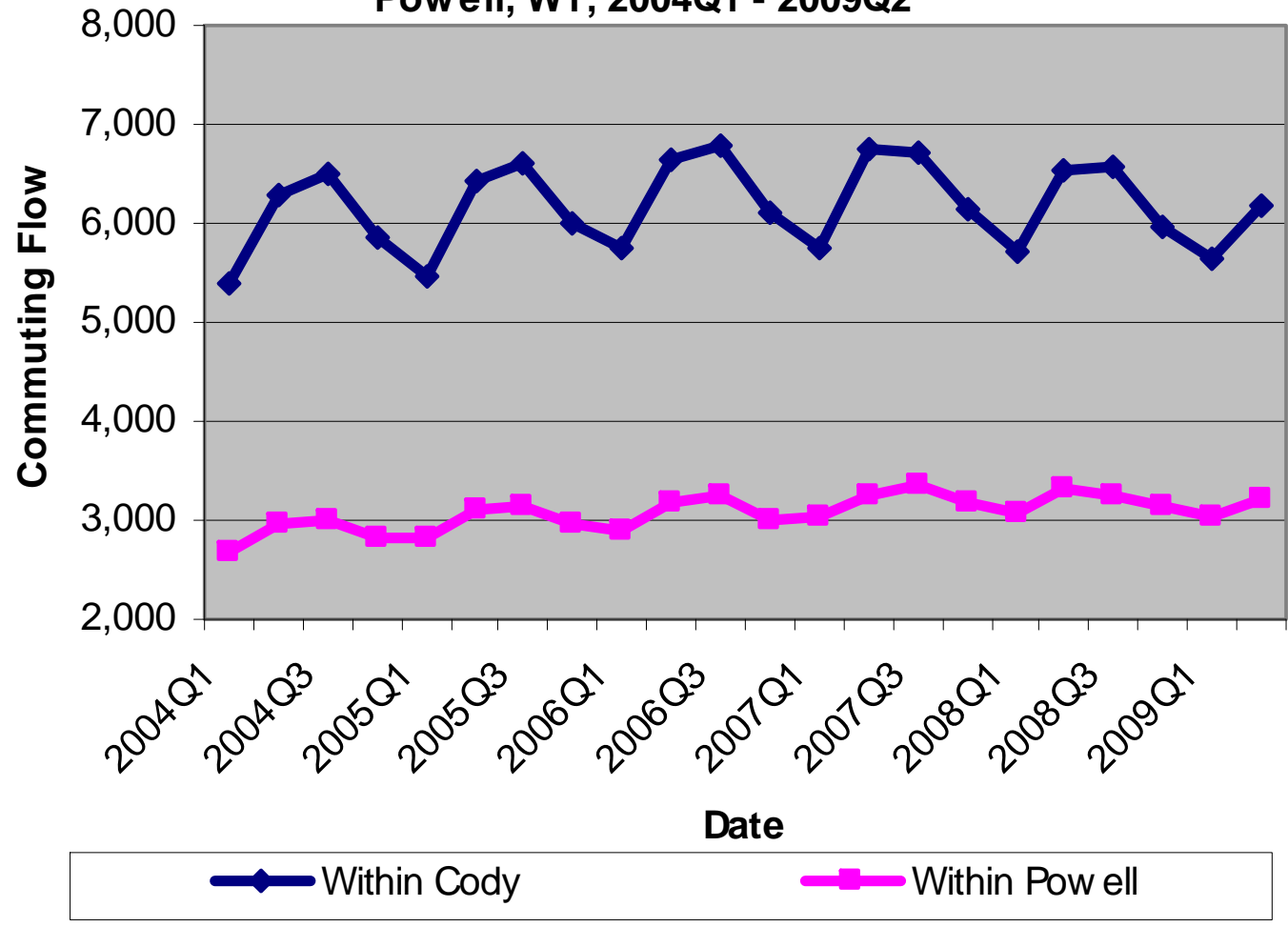
Figure 1: Intercity Commuting Between Cody, WY and Powell, WY, 2004Q1 - 2009Q2





Intracity Commuting

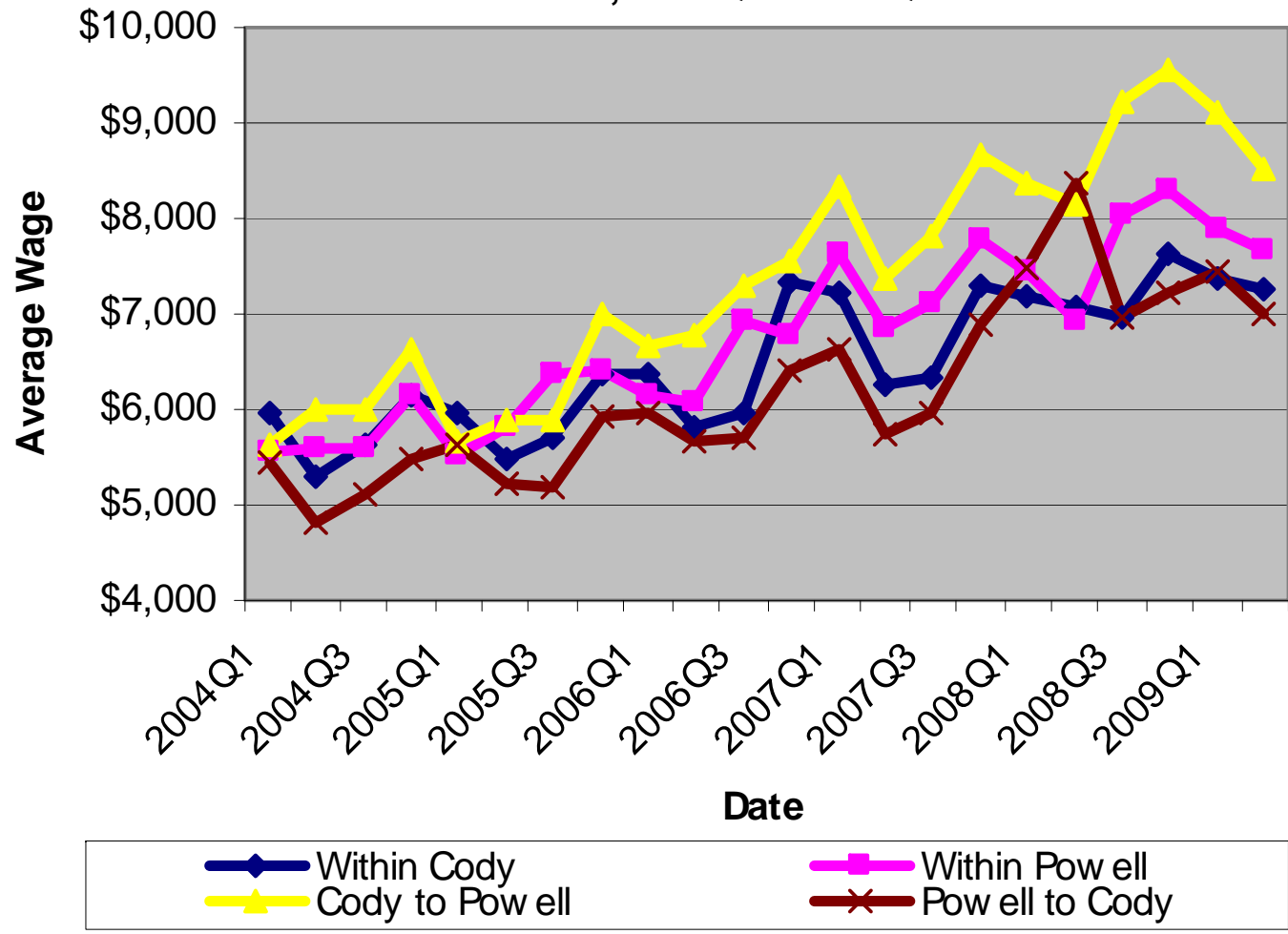
Figure 2: Intracity Commuting Flows for Cody, WY and Powell, WY, 2004Q1 - 2009Q2





Wage Analysis

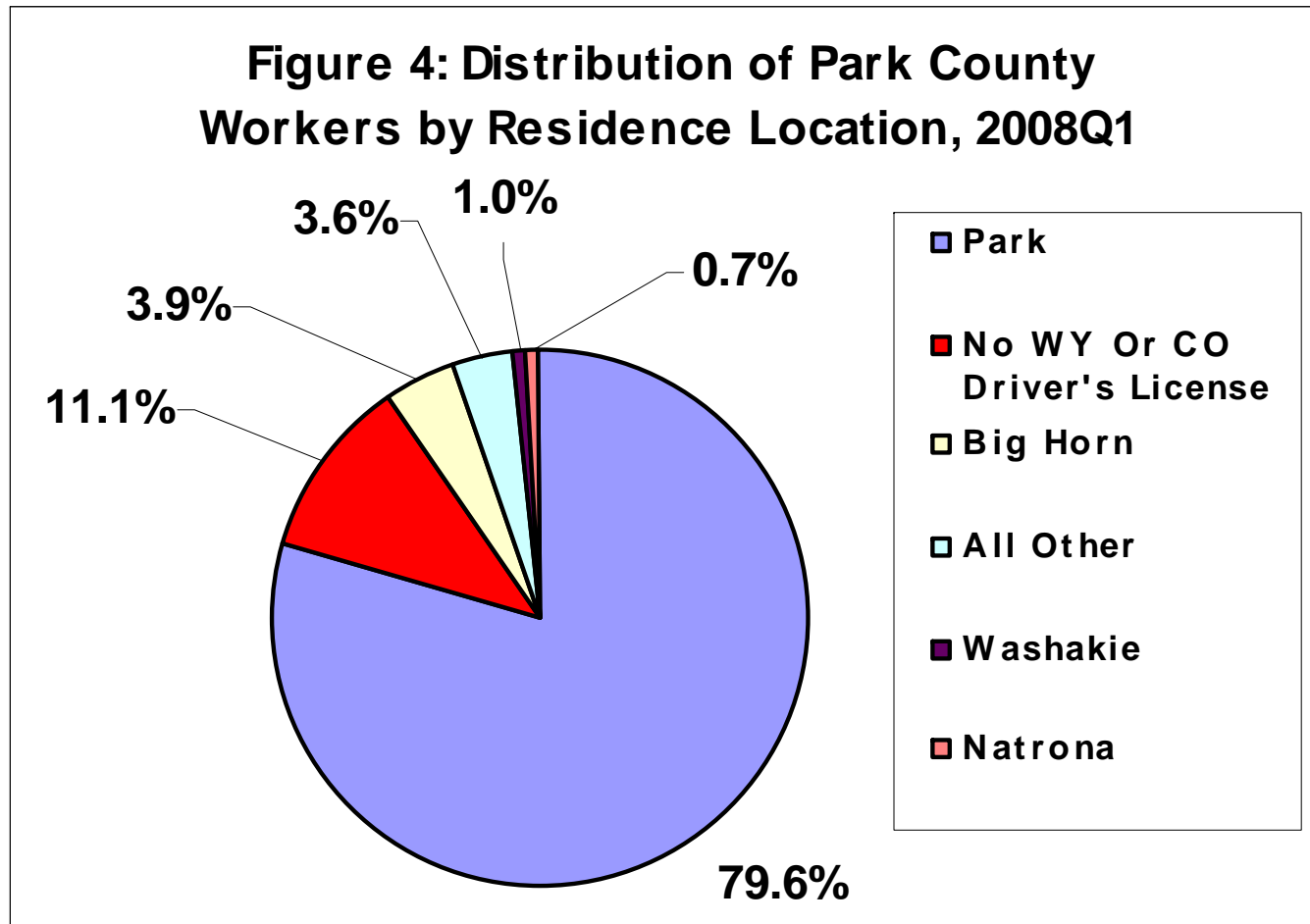
Figure 3: Average Wages for Powell, WY and Cody, WY Commuters, 2004Q1 - 2009Q2





Sources of Park County Workers, 2008Q1

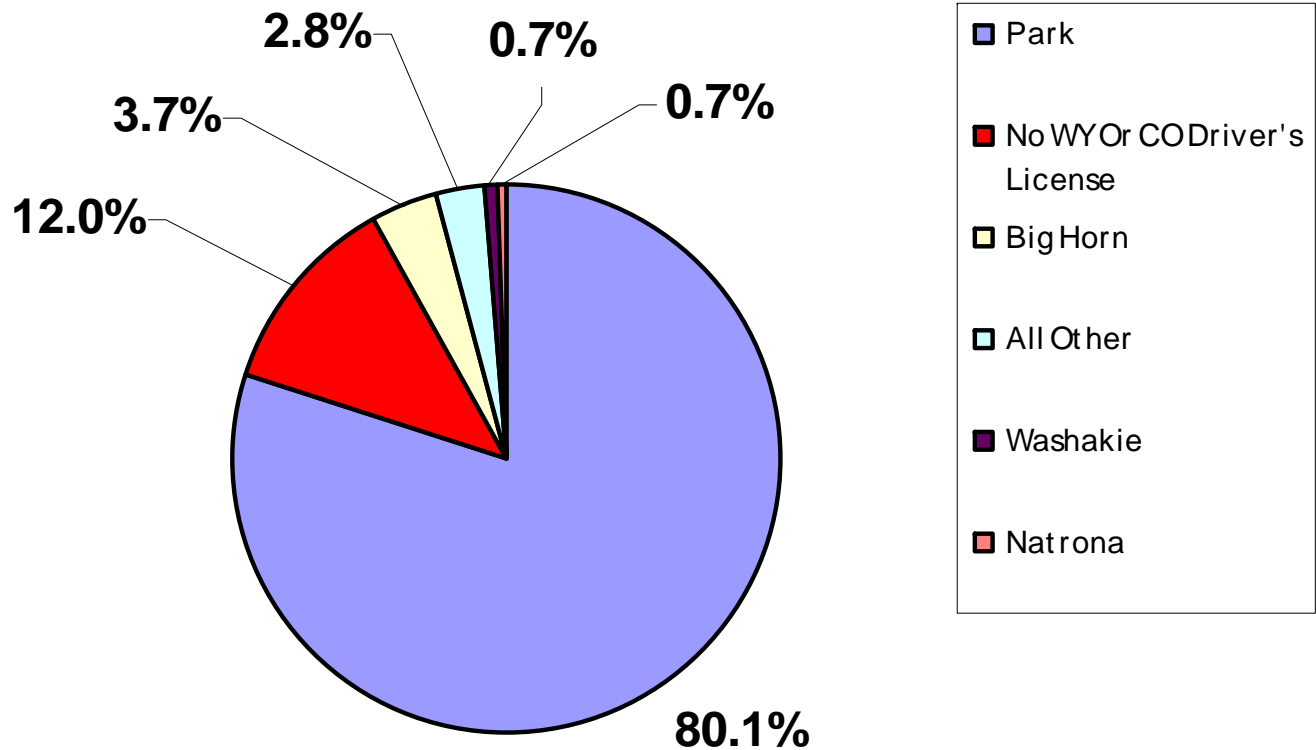
Figure 4: Distribution of Park County Workers by Residence Location, 2008Q1





Sources of Park County Workers, 2009Q1

Figure 5: Distribution of Park County Workers by Residence Location, 2009Q1





Questions?



1/5/2010

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<http://doe.state.wy.us/LMI>